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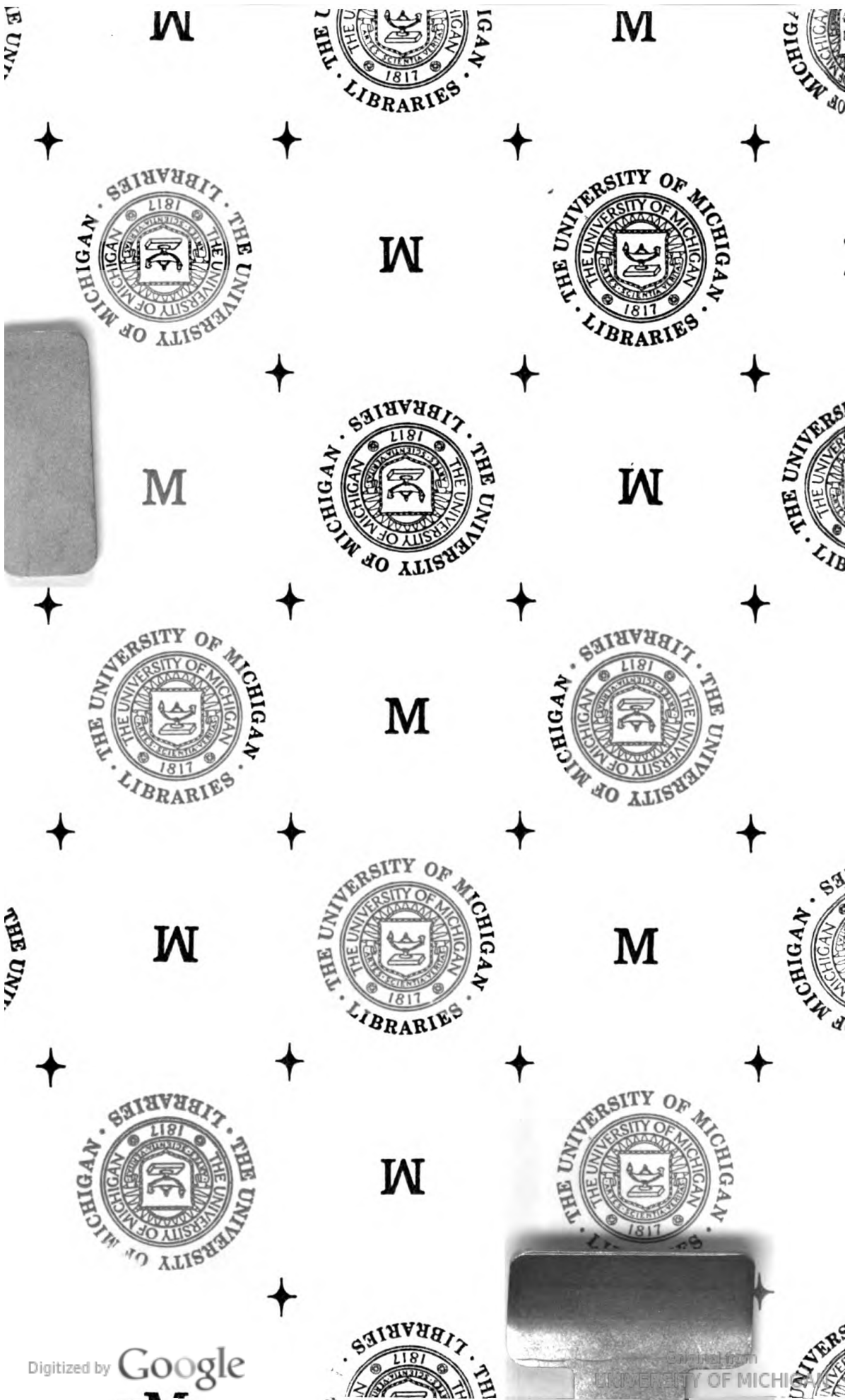


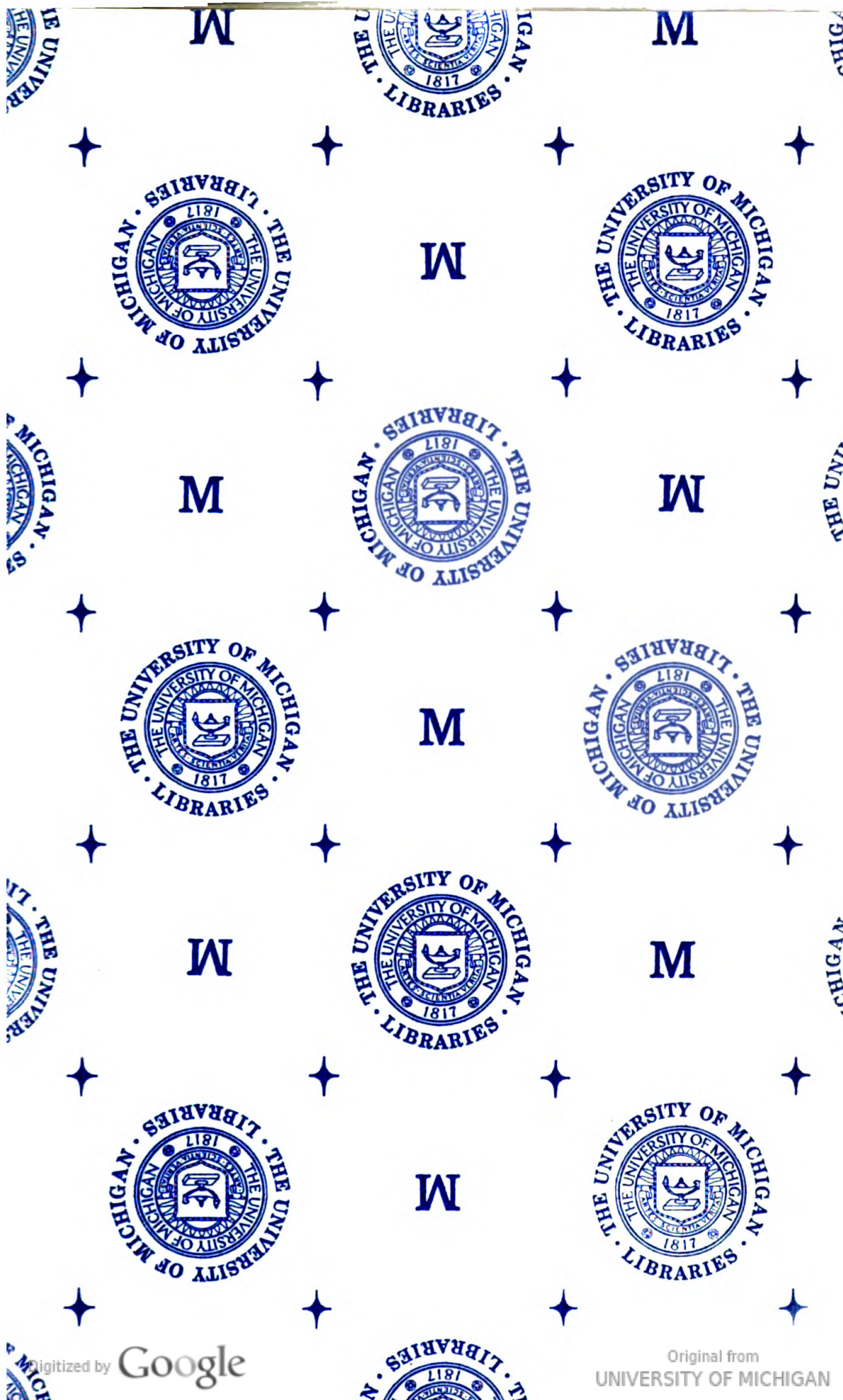
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THE AMERICAN NUMISMATIC SOCIETY

67
MUSEUM NOTES

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THE AMERICAN NUMISMATIC SOCIETY

NEW YORK

1975

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PRINTED IN BELGIUM AT CULTURA, WETTEREN

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ERRATA

Page 30, lines 1-2: *For PLATE X read PLATE XI*

Page 33, note 19: *For PLATE XII, 5 read PLATE XII, 6*

Page 36, line 8: *For PLATE XI read PLATE XII*

PLATE XX: The reverses of nos. 3 and 4 are transposed

SOME UNPUBLISHED ATHENIAN BRONZE COINS

(PLATE I)

FRED S. KLEINER

The American excavations in the Athenian Agora have been in progress since 1931 and over 75,000 coins have been unearthed thus far. Ancient coins in the Agora dating prior to the Herulian raid of A.D. 267 are predominantly Athenian, although coins of other Greek mints and post-Sullan Roman coins are frequently encountered.¹ Among the Athenian finds there is a small series of hitherto unpublished Hellenistic bronze fractions which could be confused with some Athena/Owl fractions of the 2nd and 3rd centuries A.D., because of the dotted reverse border.² On the grounds of style and provenance these coins must, however, date from the 3rd century B.C. The types (with the Agora inventory numbers of the individual specimens), are as follows:

Obv.: Head of Athena r., wearing Corinthian helmet.

A

Rev.: Θ E Owl r., wings closed, on thunderbolt; border of dots.

Z-2750 IIII-191 (PLATE I, 1)

Obv.: Head of Athena r., wearing Corinthian helmet.

Rev.: A Θ Owl r., wings closed, on thunderbolt; border of dots.

Z-2812 Z-1398 (PLATE I, 2)

HH-222 (PLATE I, 3) NN-1243

¹ For the Roman finds, see M. Thompson, *The Athenian Agora*, II, *Coins from the Roman through the Venetian Period* (Princeton, 1954). For a survey of the Greek and Roman finds through Constantine the Great, see F. S. Kleiner, *Greek and Roman Coins in the Athenian Agora*, a forthcoming booklet in the series *Excavations of the Athenian Agora Picture Books*.

² J. Svoronos, *Les monnaies d'Athènes* (Munich, 1923-6), pl. 88, nos. 35-42. In preparing this note I profited from discussing these pieces with Alan Walker (University of Pennsylvania), to whom I am indebted. Mr. Walker is presently engaged in a study of the Athenian Imperial coinage. I am also grateful to Prof. T. Leslie Shear, Jr., Director of the Agora Excavations, for permission to publish the Agora pieces in ANSMN.

The two varieties of reverse ethnic are die-linked. *III*-191 and *Z*-1398 share the same obverse die. Three of the six pieces were discovered in meaningful contexts. *Z*-2750 and *Z*-2812 are part of a deposit of coins and pottery, Agora Deposit H 12:1, which filled the west branch of the Great Drain. The west branch was closed early in the third quarter of the 2nd century B.C. *NN*-1243 is part of Agora Deposit A-B 19-20:1, the filling of the south branch of the Great Drain, closed somewhat later in the century.³ The two deposits furnish a firm, if late, *terminus ante quem* for the unpublished coins. The coins might, however, be considerably earlier in date, for many 4th-century pieces were also found in these deposits. Deposits are very different from currency hoards, and even from savings hoards, for they often comprise material accumulated over centuries, as is the case with finds in the Agora drains.

For a narrower dating, one must rely upon style and the evidence of other deposits and hoards. The unpublished coins are most closely related to a specimen in Berlin published by Svoronos.⁴ The piece is comparable in style and types to the Agora coins, especially those with

A

the ethnic Θ E, but the reverse border of dots is absent on the Berlin specimen. A dotted reverse order is, in fact, quite exceptional on the Hellenistic bronze coinage of Athens. It appears on some 3rd-century large bronze issues, with standing Athena as reverse type, and Zeus or Artemis as obverse devices,⁵ and on two considerably later "Delian

³ H. A. Thompson, *The Tholos of Athens and Its Predecessors*, *Hesperia Supplement* 4 (Baltimore, 1940), pp. 119-20. R. S. Young, "An Industrial District of Ancient Athens," *Hesperia* 1951, pp. 262-3. R. H. Howland, *The Athenian Agora*, IV, *Greek Lamps and Their Survivals* (Princeton, 1958), p. 241. M. Lang and M. Crosby, *The Athenian Agora*, X, *Weights, Measures and Tokens* (Princeton, 1964), pp. 135-6. B. A. Sparkes and L. Talcott, *The Athenian Agora*, XII, *Black and Plain Pottery* (Princeton, 1970), p. 384. Virginia R. Grace kindly discussed with me the evidence of the stamped amphora handles. Those of Deposit A-B 19-20:1 run down to the third quarter of the 2nd century, with the exception of two Knidian stamps of the *duoviri* period, datable ca. 108 and ca. 88 B.C. The latest amphora stamps of Deposit H 12:1 are Knidian of the third quarter of the 2nd century B.C.

⁴ Svoronos, pl. 23, no. 46.

⁵ Svoronos, pl. 25, nos. 1-10.

cleruchy" fractional issues with Artemis or Apollo and wheat ears as types.⁶ A dotted reverse border is, to my knowledge, otherwise unknown.

The reverse type of the Agora coins and the related Berlin specimen is duplicated on another series of Athenian bronzes which is found in much greater numbers in the Agora excavations:

Obv.: Head of Athena r., wearing Attic helmet.

A Θ

Rev.: E Owl r., wingsc losed, on thunderbolt. (PLATE I, 4)⁷

This variety, with Attic helmet, is contemporary with, or slightly earlier than, another common Athenian series, with Corinthian helmet:

Obv.: Head of Athena r., wearing Corinthian helmet.

A

Rev.: Θ E Owl r., wings closed, on prow r. (PLATE I, 5)⁸

Five moderately to very worn specimens of the owl on thunderbolt variety were present in a hoard of 49 bronze coins found in 1938 in Tambouria in Piraeus.⁹ The hoard was probably secreted during the third quarter of the 2nd century B.C. and is thus roughly contemporary with Agora Deposits H 12:1 and A-B 19-20:1.

The owl on prow series has not yet turned up in a recorded hoard, but both it and the owl on thunderbolt series were among those coins excavated in the construction fill of the Middle Stoa in the Athenian Agora, Agora Deposit H-K 12-14, datable about 180 B.C.¹⁰ These

⁶ Svoronos, pl. 106, nos. 72-5; pl. 107, nos. 18-23.

⁷ Svoronos, pl. 23, nos. 47-9. PLATE I, 4: Agora BB-475.

⁸ Svoronos, pl. 23, nos. 50-2. PLATE I, 5: Agora T-51.

⁹ IGCH 249. I am grateful to Dr. Mando Caramessini Oeconomides for allowing me to examine the hoard in Athens.

¹⁰ F. S. Kleiner, "The Earliest Athenian New Style Bronze Coins. Some Evidence from the Athenian Agora," *Hesperia*, forthcoming. H. A. Thompson and R. E. Wycherley, *The Athenian Agora*, XIV, *The Agora of Athens* (Princeton, 1972), pp. 66-8, 103-4. The date is based largely upon the evidence of the stamped amphora handles in the fill. V. R. Grace, "Les timbres amphoriques grecs," *Exploration archéologique de Délos* 27 (Paris, 1970), pp. 291, 320; "Stamped Handles of Commercial Amphoras," *Excavations at Nessana* 1 (London, 1962), p. 124.

two varieties are the fractional bronze denomination which accompanies the Athena/Zeus holding thunderbolt types (with Attic and Corinthian helmet, and owl and prow as reverse symbols)¹¹ struck at the end of the 3rd or the beginning of the 2nd century B.C. They are among the latest coins in the Middle Stoa building fill.¹²

The Berlin piece and the unpublished Agora coins with dotted reverse border may constitute a small transitional issue between the owl on thunderbolt series with Attic helmet and the owl on prow series with Corinthian helmet. They may, however, precede these two issues,

A

because the arrangement of the ethnic, Θ E or A Θ, reflects earlier practice. A Θ is the standard format for the early 3rd-century series

A

Athena, Corinthian helmet/Owl in wheat wreath.¹³ Θ E is the arrangement employed on the 4th-century Athena, Attic helmet/Double-bodied owl bronzes¹⁴ and on the 3rd-century fractional series which precedes the owl on thunderbolt types:

Obv.: Head of Athena r., wearing Corinthian helmet.

A

Rev.: Θ E Owl r., wings closed; to r., symbol (cornucopiae, bakchos ring, wreath, etc.). (PLATE I, 6–7)¹⁵

A E A Θ

Θ E and E, used on the owl on thunderbolt or prow series, commonly appear on 2nd-century bronze reverses.

In any case, the unpublished Athenian coins must be dated late in the 3rd century B.C. These fractions, as well as the large Zeus holding

¹¹ Svoronos, pl. 81, nos. 1–16.

¹² Of the Athenian pieces, only the Cicada/Amphora fractions (Svoronos, pl. 107, nos. 55–69) and the star, cornucopiae, and wheat ear varieties of the Athena/Fulminating Zeus series (Svoronos, pl. 81, nos. 17–8, 28–9) postdate them.

¹³ Svoronos, pl. 22, nos. 64–70.

¹⁴ Svoronos, pl. 22, nos. 35–48.

¹⁵ Svoronos, pl. 22, nos. 73–9. PLATE I, 6: Agora OO-815; PLATE I, 7: Agora NN-781. Three such pieces, showing signs of long circulation, were also present in the Tambouria hoard, see above, note 9.

thunderbolt bronzes, document a brief period of uncertainty at the Athenian mint as to the appropriate helmet type for Athena's head. It was the Corinthian helmet that was eventually chosen as the norm for 2nd-century bronzes,¹⁶ while the highly ornamental Parthenos-type Attic helmet was adopted for the New Style silver coinage.

¹⁶ The important fractional denomination, Athena/Two owls on thunderbolt, Svoronos, pl. 24, nos. 60–8, is an exception. This series was not, however, introduced before the second half of the 2nd century, and postdates the inception of the New Style silver. The earlier, Athena/Amphora fractional bronzes, Svoronos, pl. 107, nos. 75–9, retain the Corinthian helmet of the Athena/Fulminating Zeus series, Svoronos, pl. 81, nos. 17–52.

PTOLEMAIC COINS AND CHRONOLOGY: THE DATED SILVER COINAGE OF ALEXANDRIA

(PLATES II-VI)

OTTO MØRKHOLM

INTRODUCTION

The purpose of this paper is to present a survey of the dated silver coinage of Alexandria and, especially, to assess the contribution of this material to our knowledge of Ptolemaic chronology in the 2nd and 1st centuries B.C.¹ It will be demonstrated that in some cases the numismatic evidence, which has never been systematically applied to a chronological investigation, is able to supplement the literary and documentary sources and also to correct some inferences drawn from that material.

In order to understand the chronological problems, it will be necessary to deal briefly with the Egyptian use of the regnal year. In our period the Macedonian calendar had been completely assimilated to the Egyptian, in which the new year began on Thoth 1. As the Egyptian year had 365 days, instead of the Julian $365 \frac{1}{4}$, the new year moved forward one day every fourth year when expressed in Julian dates. Thus year 27 of Ptolemy VI began on Oct. 1, 155, while year 22 of Cleopatra started on Aug. 31, 31, the new year having moved forward a little more than a month in 125 years. When counting the regnal years, the time from the accession to the first new year's day thereafter was reckoned as year 1, while year 2 began with this new year. The first full year of a reign thus becomes year 2. The length of year 1 will vary according to the date of accession and may sometimes have comprised only a few days.²

¹ All dates in this paper are B.C.

² For Egyptian chronology in general see the introductions to the following three works: T. C. Skeat, *The Reigns of the Ptolemies*, *Münchener Beiträge zur Papyrusforschung und antiken Rechtsgeschichte* 39 (Munich, 1954); A. E. Samuel, *Ptolemaic Chronology*, *Münchener Beiträge zur Papyrusforschung und antiken Rechtsgeschichte* 43 (Munich, 1962); P. W. Pestman, *Chronologie égyptienne d'après les textes démotiques* (332 av. J.-C. - 453 ap. J.-C.), *Papyrologica Lugduno-Batava* 15 (Leiden, 1967).

It should also be noted that we are dealing with the coinage of Alexandria. While most dates from papyri and ostraka derive from various parts of the country and are quite unevenly distributed, the chronological information from the coins concerns the capital. This is important because other evidence from Alexandria is very sparse. Moreover, this means that we do not have to take any considerable time lag into account between a change of ruler and a new series of regnal years. With the papyri, posthumous datings deriving from the ignorance of scribes in remote villages often have to be considered.³

1ST PERIOD. 155/4–135/4

The coinage we are dealing with consists of silver tetradrachms of ordinary Ptolemaic types (head of Ptolemy I/Eagle on thunderbolt) inscribed ΠΤΟΛΕΜΑΙΟΥ ΒΑΣΙΛΕΥΣ and dated by a numeral in Greek preceded by the Egyptian sign for year (L) indicating the regnal year. The dated series from Alexandria begins in year 27 (155/4) of Ptolemy VI Philometor (PLATE II, 1). At this time coins dated by the years of the reigning king had been issued from the Cypriot mints of Salamis, Citium and Paphos for about 35 years. A curious, and as yet unexplained, phenomenon is the occurrence on the dated coins of Alexandria of the letters ΠΑ in the right field of the reverse, in exactly the same place where the mint of Paphos placed its initials in the usual Cypriot fashion. Although the ΠΑ continues on the Ptolemaic silver of both Paphos and Alexandria right to the end of production at the two mints, the style of the coins is so different that it is normally quite easy to separate their respective issues.⁴ However, this fundamental distinction was not made by Svoronos, who, in his standard work on the Ptolemaic coinages, ascribed a number of the coins actually struck at

³ Skeat p. 4; Samuel pp. 7–8.

⁴ See E. T. Newell, *Standard Ptolemaic Silver* (New York, 1941), p. 7. The distinction between the coins of Alexandria and Paphos will be dealt with more thoroughly in the forthcoming publication of the large Paphos hoard (IGCH 1477) by Ino Nicolaou and Otto Mørkholm.

Alexandria to Paphos and thus to a considerable extent confused the chronological evidence afforded by the coins.⁵

During his year 36 (146/5), presumably in spring 145, Philometor placed a son, Ptolemy VII Neos Philopator, on the throne with himself. A system of double dating, year 36 of Philometor = year 1 of his son, was also introduced and is known both from papyri and from a few coins issued in Alexandria. The dating formula on the coins reads $\Lambda\Lambda\Box$ KAI A (PLATE II, 4). Five specimens of this issue are known to me, all struck from the same obverse die, which was also used for coins from the same year dated by Philometor alone (PLATE II, 5). This was duly noticed by Newell in his publication of the Kenek hoard,⁶ but a closer inspection of the two coins shows that the specimen dated by Philometor alone was struck *after* the specimen with double date, as the obverse die, when used with the former, shows obvious traces of greater wear. We must conclude that the coins with double date, for which only a single obverse die was used, formed a special issue, presumably produced to celebrate or proclaim the participation of Neos Philopator in the royal power. Apparently Ptolemy VI soon returned to the normal coinage dated by his own regnal year. Five obverse dies are at present known from this year, including the one also used for the issue with double date. Another of the five obverse dies had already been used in year 35 (PLATE II, 2-3).

In late summer 145 Philometor died during a campaign in Syria, and his brother, Ptolemy VIII Euergetes II, quickly seized the opportunity to remove the young Neos Philopator and place himself on the Egyptian throne. At an earlier date, in 170/69, he had been appointed co-regent together with Philometor and their sister, Cleopatra II. He reckoned his years of reign from this date and consequently, on gaining the power in Alexandria, he started off with year 25, corresponding to the Egyptian year Sept. 29, 146 — Sept. 27, 145. His accession must have taken place

⁵ J. Svoronos, *Tá νομίσματα τοῦ κράτους τῶν Πτολεμαίων II* (Athens, 1904), nos. 1437-51 (Ptolemy VI) and nos. 1501-32 (Ptolemy VIII).

⁶ E. T. Newell, *Two Recent Egyptian Hoards*, *ANSNM* 33 (1927), pp. 25-6. In this publication Newell thought that the coins were from Paphos, but later he changed his mind. [A. E. Samuel, "Year 27=30 and 88 B.C.," *Chronique d'Égypte* (Brussels, 1965), p. 397 still ascribes them to the Cypriot mint.

before Sept. 19, 145 according to the documents, but as his Alexandrian coinage of year 25 (PLATE II, 6) was struck from at least five different obverse dies this event should be placed as early as possible, that is to say, in late July or early August 145, leaving one and a half to two months of the year for this rather intensive coin production. Consequently, the latest known date by Philometor and Neos Philopator, August 21, 145, is in all likelihood to be regarded as posthumous.⁷

During this first period we thus have two coin series: Philometor's, dated from year 27 to year 36 (155/4–146/5), and Euergetes', running from year 25 (146/5) onward. As they are separated by only 11 years it becomes evident that a differentiation based on stylistic considerations alone is a rather hazardous affair. It seems better to admit that up to year 36 of Ptolemy VIII (135/4) the list of issues in our tabular survey (below p. 19) represents only the most probable arrangement and may be subject to changes.⁸

2ND PERIOD. 134/3–123/2

With the coins dated year 37 and later we are on certain ground because only the reign of Ptolemy VIII will accommodate coins of these dates. In 132/1 the sister and wife of Ptolemy VIII, Cleopatra II, raised a revolt against her brother and appears as sole ruler for a couple of years. Documents from the Thebais are dated by her 1st and 2nd years which correspond to years 39 and 40 of Ptolemy VIII (132/1–131/0).⁹ In the reconstruction of the events it is generally assumed that the revolt started in Alexandria and that Ptolemy VIII had to leave

⁷ For the events of 146/5 see Walter Otto, "Zur Geschichte der Zeit des 6. Ptolemäers," *Abhandlungen der Bayerischen Akademie der Wissenschaften*, Philos.-hist. Abt. New Series No. 11 (Munich, 1934), pp. 128 ff. and Walter Otto and Hermann Bengtson, "Zur Geschichte des Niederganges des Ptolemäerreiches," *Abhandlungen der Bayerischen Akademie der Wissenschaften*, Philos.-hist. Abt., New Series No. 17 (Munich, 1938), pp. 24–8. (cited Otto-Bengtson). See also Skeat pp. 34–5; Samuel pp. 144–5; Pestman pp. 54–6.

⁸ This applies especially to the coins dated to the 30's. Only a complete die study will enable us to arrive at a final solution.

⁹ See Otto-Bengtson pp. 47 ff.; Samuel p. 146.

his capital and withdraw to Cyprus during his 39th year of reign.¹⁰ Against this it should be pointed out that we have coins from Alexandria not only from year 39 (PLATE II, 7) but also a few specimens from a single obverse die dated year 40 (PLATE III, 1). As Cleopatra II introduced her own new dating, these coins can only have been struck by Ptolemy VIII. They show beyond any possible doubt that he was still recognized in Alexandria after Sept. 25, 131, and that his flight to Cyprus must be placed after that date. It is also of some importance to be able to show that the revolt of Cleopatra II started in the country and that she gained control of the capital only at a later date.¹¹

In 131/0 Ptolemy VIII was already attempting, from Cyprus, to recover his kingdom. Alexandria, however, stood firm against his attacks. No coins from its mint show the dates 41 and 42. The coinage of Ptolemy VIII was resumed only in year 43, Sept. 24, 128 – Sept. 23, 127 (PLATE III, 2), during which the king must have recovered his capital.¹² A few coins of year 44 are known,¹³ but then the mint apparently lay idle throughout years 45–48.

3RD PERIOD. 122/1–89/8

In year 49 (122/1) a continuous and extensive minting began, running through the remaining years of Ptolemy VIII until year 54 (117/6) (PLATE III, 3) and on into the next reign.

After the death of Ptolemy VIII on June 28, 116¹⁴ the coinage of Alexandria continued with a series dated year 1 (PLATE III, 4) to year 10 (PLATE III, 5). During the same year 116, the death of Cleopatra II left the royal power with her daughter and rival, Cleopatra III, who

¹⁰ Otto-Bengtson pp. 56–7.

¹¹ Samuel p. 147 has the correct order of the events, but cannot be right in dating the return of Euergetes II to Alexandria before January 15, 130. The situation is further complicated by the contemporary revolt of an indigenous ruler, Harsiesis. See Pestman pp. 58–62.

¹² Otto-Bengtson pp. 95–9.

¹³ The forthcoming work by Nicolaou and Mørkholm, will publish them as Alexandrian coins nos. 33–5.

¹⁴ For the date see Otto-Bengtson pp. 113–4.

had accepted her own elder son by Ptolemy VIII, Ptolemy IX Soter, as co-regent.¹⁵ The relationship between mother and son soon deteriorated and on two occasions, in 110/9 and again in 109/8, the son was temporarily deprived of his rights and replaced by his younger brother, Ptolemy X Alexander I.¹⁶ These events made no impact on the coinage. In 107 Soter II was finally expelled from Alexandria and had to take refuge in Cyprus, while his younger brother took his place as co-regent with the dominant mother.¹⁷ The change in government was advertised by a series of coins with double dates running from year 11=8, 107/6 (PLATE III, 6) to year 16=13, 102/1 (PLATE III, 7),¹⁸ the higher numeral representing the regnal year of Cleopatra III, the lower one that of Alexander I, who reckoned his reign from 114/3 when he took the title of king in Cyprus and struck coins there dated by his own regnal years. Thus we are not dealing with a retroactive dating, as some scholars have assumed.¹⁹ We have neither coins dated to year 11 alone, nor any carrying the double date year 10=7. The conclusion must be that the changing of co-regents was effected very close to the beginning of the Egyptian New Year, Sept. 19, 107, when Cleopatra III moved from her 10th to her 11th year of reign.²⁰

During the joint rule of Cleopatra III and Alexander I, a single year, 14=11 (104/3), saw no coinage at all. We know of no political reasons for this gap in the coinage and may presume economic and financial factors. A simple explanation might be that the coin production of the preceding years was so extensive that for a single year no new coinage was actually needed. In 102/1 Cleopatra III was murdered by Alexander I, who was unwilling to remain forever under the strict authority of his impetuous

¹⁵ For the circumstances of the change of reign in 117/6 see Otto-Bengtson pp. 112 ff. Ptolemy VIII had married both his sister, Cleopatra II, and his niece, Cleopatra III, daughter of Ptolemy VI and Cleopatra II.

¹⁶ See Otto-Bengtson pp. 162–5, 174–5.

¹⁷ Otto-Bengtson pp. 178 ff.

¹⁸ Svoronos nos. 1727–31.

¹⁹ Otto-Bengtson p. 172. The numismatic evidence will be set out in detail by Nicolaou and Mørholm in the forthcoming publication of the Paphos hoard. Cf. also Porphyry in F. Jacoby, *Die Fragmente der griechischen Historiker* II B, (Berlin, 1929), no. 260, F 2 (8).

²⁰ Otto-Bengtson p. 180; Samuel p. 151.

mother. The exact date of Cleopatra's death has been disputed, but the existence of a coin dated to year 13 of Alexander I alone (PLATE III, 8) shows that Cleopatra had died before the end of her 16th year (corresponding to Alexander's 13th), i.e. before Sept. 16, 101.²¹ The single ostrakon dated year 17=14 must be posthumous.²²

Ptolemy X Alexander I continued his reign in Alexandria, and issued a continuous series of dated coins from year 13 (102/1) to year 26 (89/8). With the issues of the last two years, 25 and 26, we arrive at numerals, which had already been used by Ptolemy VIII at the beginning of his sole reign. But by now the distance in time, ca. 55 years, has brought so obvious stylistic changes that the two series cannot be confused.

A few years ago the events surrounding the disappearance of Alexander I from the Egyptian throne and the reinstatement of his elder brother, Soter II, in Alexandria were examined.²³ However, the contribution of the Alexandrian coinage to the complicated chronological problem was not taken into account, although it is quite decisive. The numismatic material at disposal is listed here:²⁴

Ptolemy X Alexander I ΛΚΕ (year 25 = 90/89)

1. A1 – P1 14.45 gm. British Museum (PLATE IV, 1).
2. A2 – P2 13.67 gm. ANS (PLATE IV, 3).
3. A3 – P3 13.61 gm. Paris, acq. 1967 (PLATE IV, 6).

Ptolemy X Alexander I ΛΚϚ (year 26 = 89/88)

4. A1 – P4 14.26 gm. Paris ex Dattari (PLATE IV, 2).
5. A2 – P5 13.95 gm. Copenhagen, acq. 1974 (PLATE IV, 4).

Ptolemy IX Soter II ΛΚΘ (year 29 = 89/88)

6. A2 – P6 14.17 gm. ANS (PLATE IV, 5).
7. A3 – P7 13.60 gm. Osnabrück: Svoronos 1687 γ (PLATE IV, 7).

²¹ Otto-Bengtson p. 134, note 3; Skeat p. 36; Samuel p. 152.

²² Pestman p. 71.

²³ A. E. Samuel, *Chronique d'Égypte* 1965, pp. 376–85.

²⁴ In the list the dies are numbered separately, A standing for anvil or obverse die, P for punch or reverse die. My thanks are due to the curators who have kindly permitted me to publish coins from collections in their charge.

8. A3 – P8 14.23 gm. ANS.
9. A3 – P9 13.65 gm. ANS.
10. A4 – P10 13.31 gm. Paris ex Dattari: Svoronos 1687 ζ.
11. A4 – P11 13.83 gm. Athens: Svoronos 1687 α, pl. lvii, 31.
12. A5 – P12 14.39 gm. ANS (PLATE IV, 8).
13. A6 – P13 14.22 gm. British Museum: BMC p. 114, no. 70, pl. xxviii, 8; Svoronos 1687 β.

The importance of the numismatic evidence lies in the fact that two obverse dies (A2 and A3) were used in both year 25 (of Ptolemy X) and year 29 (of Ptolemy IX), and one of them (A2) also in year 26 (of Ptolemy X). It is thus quite certain that Ptolemy IX Soter II was reigning in Alexandria before the end of 89/88 or in Julian terms before Sept. 13, 88. The use of five different obverse dies for the issue of year 29 indicates that the reinstatement of Soter II took place well before this date. The evidence of the papyri must be considered next. A papyrus in Cairo shows that on May 29, 88 an Egyptian scribe in the countryside dated by both year 26 of Alexander I and year 29 of Soter II.²⁵ In the Thebais a papyrus of Sept. 6, 88 is dated by Alexander alone, while another of Oct. 4, 88 is dated by both kings, year 27 = year 30. Immediately afterward, on Oct. 5, 88, a scribe in the same region dated by Soter II alone.²⁶ Our documentary information is, of course, both intermittent and haphazard, but as it stands at present it shows that rather early in 89/88 Soter II took Alexandria. The two double dates show that afterward some confusion existed among the scribes as to who was king. In the Thebais Alexander I was recognized until late in 89/8, and the uncertainty here in this distant region was only dispelled early in the following year, 88/7. The conclusion is that, after leaving Alexandria, Alexander I (whether personally or through his loyal supporters we cannot tell) was able to maintain his control of part of the country and that this situation lasted until the beginning of 88/7.

The earlier reconstruction of the events, that Alexander remained in possession of Alexandria until well into his 27th year (late 88) and then

²⁵ Pestman pp. 74–6 = W. Spiegelberg, *Die Demotischen Denkmäler II, Catalogue général des antiquités Égyptiennes du musée du Caire* (Cairo, 1906–8), 30, 614, 6.

²⁶ A. E. Samuel, *Chronique d'Égypte* 1965, pp. 381–2. Samuel does not mention the Cairo papyrus referred to in the preceding note.

marched out to fight Soter II in the country, where the latter had succeeded in establishing himself,²⁷ must be turned exactly the other way around. Soter II undoubtedly first recovered Alexandria rather early in 88 and then fought Alexander I in the countryside. The wrong interpretation derives from an excessive confidence in Porphyry's short account of the events. According to this, Soter II was recalled by the citizens of Alexandria at a time when Alexander I had already been driven out of Egypt.²⁸ Porphyry's chronology of the reigns of the various kings is generally reliable, but his historical comments on the exact sequence of the events cannot be accepted in the face of contradictory evidence from contemporary documents and coins.

4TH PERIOD. 82/1-58/7

After his recovery of the Egyptian throne in 89/8 Soter II ruled undisturbed until his death in year 37, 81/0, presumably about the beginning of March 80. From this period only a single coin is known, dated year 36, 82/1 (PLATE V, 1). After the break of six full years a new portrait style was introduced which was carried over into the next series of coins with dates from year 1 (PLATE V, 2) to years 23 (PLATE V, 3) or 24 (PLATE V, 4). This series belongs to Ptolemy XII Neos Dionysos, nicknamed Auletes, except that the coins of year 1, which are not uncommon, may as well have been struck by Cleopatra Berenice who reigned for a little more than six months after the death of Ptolemy IX. According to the generally accepted interpretation of the documentary evidence the Egyptian year 81/0 was almost completely occupied by the reigns of Soter II and Cleopatra Berenice.²⁹ If the first year of Auletes was of very short duration, possibly only a few days, most of the coins from year 1 will actually have been struck by Cleopatra Berenice.

The whole series under discussion here was attributed by Svoronos to Cleopatra VII, but this is definitely wrong. The series is continuous except for year 11 and goes on until at least year 23. Two coins, one

²⁷ A. E. Samuel, *Chronique d'Égypte* 1965, pp. 384-5.

²⁸ Jacoby, *Die Fragmente der Griechischen Historiker* II B (Berlin, 1929), no. 260, F 2 (9).

²⁹ On the year 81/0 see Skeat pp. 36-7; Samuel pp. 153-5; Pestman pp. 74-7.

in Athens (Svoronos 1869 α, pl. Δ, 21) and one in the American Numismatic Society (PLATE V, 4) show a date which has been read as L K Δ but, following Svoronos, the last letter of the Athens coin may also be read as a rather badly formed B while the coin in New York most probably reads L K A. However this may be, the reign of Cleopatra VII came to an end with her 22nd year and cannot possibly accommodate a series of coins continuing until year 23. As pointed out by Regling, the series in question must be attributed to Ptolemy XII and represents his coinage in Alexandria down to 59/8 or perhaps 58/7.³⁰

5TH PERIOD. 55/4–31/0

During year 24 (58/7) Auletes had to leave Egypt and for about three years the kingdom was ruled by his daughter, Berenice IV, first in association with her sister, Cleopatra Tryphaena, later with a certain Archelaus. This reign has left no coinage as far as we know.³¹ With the assistance of Aulus Gabinius, Roman proconsul of Syria, Ptolemy XII was able to return to Alexandria early in 55, during his 26th year. Coinage, however, was first resumed in the following year, 27 (PLATE V, 5). After the incredibly low artistic standard of the preceding series a new portrait with a certain flashy elegance and characterized by an elaborate hairstyle makes a refreshing change. The hairstyling above the diadem consists of several sharply separated rows of locks arranged alternately and placed in tiers one above the other (see fig. 1). The coinage seems to continue until year 30, 52/1, the last year of Ptolemy XII Auletes (PLATE V, 7). However, this type of coin was also used by his successor, the great Cleopatra VII, with no changes at all except

³⁰ Svoronos nos. 1847–52, 1854–70. See Regling, in a review of Svoronos, *ZNum* 1906, p. 394 (= Svoronos IV col. 508). It follows that Svoronos nos. 1815–35 must be attributed to Cleopatra VII and this is confirmed by hoards such as *IGCH* 1722 and 1732.

³¹ There is a slight possibility that some of the coins here ascribed to Ptolemy XII, years 1–3 may actually have been struck by Berenice IV. Only a complete die study will be able to solve this question. For the chronology of these years see Skeat pp. 37–9; Samuel pp. 155–6; Pestman pp. 80–1. The historical circumstances of Auletes' flight and return are dealt with by E. Olshausen, *Rom und Ägypten von 116 bis 51 v. Chr.* (Diss. Erlangen/Nuremberg, 1963), pp. 45–63.

for the dates. It now happens that at this time the distinction between A and Λ in the coin inscriptions was practically non-existent. Both in the royal title, ΒΑΣΙΛΕΩΣ, and in the initials ΠΑ we find many cases where Λ is used instead of A. The rather regrettable result of this carelessness is that when we meet with coins dated ΛΑ we cannot be sure whether it stands for year 30 or year 1. In this case, of course, it is the same Egyptian year and that is certainly provided with a coinage, but here the numismatic material offers no information concerning the change of ruler.³²



Fig. 1



Fig. 2

During years 5–7 there was a cessation of the normal production of tetradrachms, most probably a sign of the financial difficulties associated with the Alexandrine War. In year 6 an issue of drachms with the portrait of Cleopatra on the obverse announced her secure position after the intervention of Julius Caesar on her behalf. The tetradrachm coinage was resumed in year 8. In year 12 (41/0) a new hairstyle appears on the obverse heads (PLATE VI, 3). The hair above the diadem is now treated as a single cap formed by long undulating locks radiating from a central point at the top of the skull (see fig. 2). This new style continues to the end of the reign. We thus have a neat distinction between the “tier-hairstyle” used on the coins up to and including year 11 (PLATE VI, 2) and the “central-hairstyle” used from year 12 and throughout the remaining years of the reign.

³² The death of Ptolemy XII is generally placed about February 51, in which case Cleopatra VII would have had at least six months to produce a coinage of year 1. See Skeat pp. 40–1; Samuel pp. 156–8; Pestman p. 80.

To the clear distinction here established there are a few exceptions. Coins of the second (central-hairstyle) style, dated to year 1 and year 7 are known (PLATE VI, 5 and 7). It seems quite unreasonable that the clear pattern developed above should be broken in only two years. With several die cutters working simultaneously at a mint, different styles might occur in the same period. But we should expect such a stylistic diversity to make itself felt throughout the period and not to be concentrated in two years. Fortunately an explanation can be found. In year 16 of Cleopatra VII (37/6) Caesarion, her son by Caesar, was apparently appointed joint king. We know from the Egyptian documents a series of double dates which begins with "year 17 and 2" and continues to the end of Cleopatra's reign with "year 22 and 7." It is hardly likely that the Egyptian documents refer in any way to Cleopatra's acquisition of various territories in Syria, etc., which she received from Mark Antony in 36, although Porphyry clearly states that this was the occasion for the introduction of a new separate dating.³³ A new dating alluding to the reign of Cleopatra in a quite different geographical area which was received as a gift from her Roman consort would hardly be thought appropriate in the old homeland of the Ptolemies. The theory of a coregency with Caesarion is clearly preferable as an explanation of the double dates in Egypt. This allows us to ascribe the stylistically exceptional coins of year 1 and year 7 to the young co-regent. The coins, being contemporary with year 16 and year 22 of Cleopatra, now fall into the series with the most complete accordance (PLATE VI, 4-7). We may even understand why precisely coins of year 1 and year 7 are known. The first issue was intended to celebrate the establishment of the co-regency, while the coins of year 7 fall in the decisive year 31/0. They were produced after the battle of Actium (September 31) at the time when Cleopatra was back in Egypt and awaiting the arrival of Octavian. We know that during these months of trouble and anguish Cleopatra retained the hope of leaving her kingdom to

³³ Porphyry in F. Jacoby, *Die Fragmente der Griechischen Historiker* II B (Berlin, 1929), no. 260, F 2 (17). See also A. E. Samuel "The Joint Regency of Cleopatra and Caesarion," *Études de Papyrologie* (Cairo, 1971), pp. 73-9. The arguments of Samuel have not been accepted by Pestman pp. 82-4, but are now strengthened by the above interpretation of the coin dates.

her son, a hope that was not to be fulfilled.³⁴ The rather poor issues of Cleopatra, year 22, and Caesarion, year 7, thus become pathetic monuments to the political endeavors and aspirations of the last ruler of the last independent Hellenistic kingdom.

THE DATED SILVER COINAGE OF ALEXANDRIA
TABULAR SURVEY

<i>Ruler</i>	<i>Regnal Year</i>	<i>Dates</i>
1ST PERIOD		
Ptolemy VI	27	Oct. 1, 155 - Sept. 30, 154
	28	Oct. 1, 154 - Sept. 29, 153
	29	Sept. 30, 153 - Sept. 29, 152 (no coinage)
	30	Sept. 30, 152 - Sept. 29, 151
	31	Sept. 30, 151 - Sept. 29, 150
	32	Sept. 30, 150 - Sept. 28, 149
	33	Sept. 29, 149 - Sept. 28, 148
	34	Sept. 29, 148 - Sept. 28, 147 (no coinage)
	35	Sept. 29, 147 - Sept. 28, 146
	36	Sept. 29, 146 - Sept. 27, 145
Ptolemy VII	1	
Ptolemy VIII	25	Sept. 28, 145 - Sept. 27, 144
	26	Sept. 28, 144 - Sept. 27, 143
	27	Sept. 28, 143 - Sept. 27, 142
	28	Sept. 28, 142 - Sept. 26, 141
	29	Sept. 27, 141 - Sept. 26, 140
	30	Sept. 27, 140 - Sept. 26, 139
	31	Sept. 27, 139 - Sept. 26, 138
	32	Sept. 27, 138 - Sept. 25, 137
	33	Sept. 26, 137 - Sept. 25, 136
	34	Sept. 26, 136 - Sept. 25, 135
	35	Sept. 26, 135 - Sept. 25, 134
	36	

³⁴ *Cambridge Ancient History* 10 (New York/Cambridge, 1934), pp. 106–11.

<i>Ruler</i>	<i>Regnal Year</i>	<i>Dates</i>	
2ND PERIOD			
Ptolemy VIII	37	Sept. 26, 134 - Sept. 24, 133	
	38	Sept. 25, 133 - Sept. 24, 132	
	39	Sept. 25, 132 - Sept. 24, 131	
	40	Sept. 25, 131 - Sept. 24, 130	
	41	Sept. 25, 130 - Sept. 23, 129	(no coinage)
	42	Sept. 24, 129 - Sept. 23, 128	
	43	Sept. 24, 128 - Sept. 23, 127	
	44	Sept. 24, 127 - Sept. 23, 126	
	45-48	Sept. 24, 126 - Sept. 22, 122	(no coinage)
3RD PERIOD			
Ptolemy VIII	49	Sept. 23, 122 - Sept. 21, 121	
	50	Sept. 22, 121 - Sept. 21, 120	
	51	Sept. 22, 120 - Sept. 21, 119	
	52	Sept. 22, 119 - Sept. 21, 118	
	53	Sept. 22, 118 - Sept. 20, 117	
	54	Sept. 21, 117 - Sept. 20, 116	
Cleopatra III & Ptolemy IX	1		
	2	Sept. 21, 116 - Sept. 20, 115	
	3	Sept. 21, 115 - Sept. 20, 114	
	4	Sept. 21, 114 - Sept. 19, 113	
	5	Sept. 20, 113 - Sept. 19, 112	
	6	Sept. 20, 112 - Sept. 19, 111	
	7	Sept. 20, 111 - Sept. 19, 110	
	8	Sept. 20, 110 - Sept. 18, 109	
	9	Sept. 19, 109 - Sept. 18, 108	
	10	Sept. 19, 108 - Sept. 18, 107	
Cleopatra III & Ptolemy X	11 = 8	Sept. 19, 107 - Sept. 18, 106	
	12 = 9	Sept. 19, 106 - Sept. 17, 105	
	13 = 10	Sept. 18, 105 - Sept. 17, 104	
	14 = 11	Sept. 18, 104 - Sept. 17, 103	(no coinage)
	15 = 12	Sept. 18, 103 - Sept. 17, 102	
Ptolemy X	16 = 13	Sept. 18, 102 - Sept. 16, 101	
	13		

<i>Ruler</i>	<i>Regnal Year</i>	<i>Dates</i>	
Ptolemy IX	14	Sept. 17, 101 - Sept. 16, 100	
	15	Sept. 17, 100 - Sept. 16, 99	
	16	Sept. 17, 99 - Sept. 16, 98	
	17	Sept. 17, 98 - Sept. 15, 97	
	18	Sept. 16, 97 - Sept. 15, 96	
	19	Sept. 16, 96 - Sept. 15, 95	
	20	Sept. 16, 95 - Sept. 15, 94	
	21	Sept. 16, 94 - Sept. 14, 93	
	22	Sept. 15, 93 - Sept. 14, 92	
	23	Sept. 15, 92 - Sept. 14, 91	
	24	Sept. 15, 91 - Sept. 14, 90	
	25	Sept. 15, 90 - Sept. 13, 89	
	26	Sept. 14, 89 - Sept. 13, 88	
	29		
	30-35	Sept. 14, 88 - Sept. 12, 82	(no coinage)

4TH PERIOD

Ptolemy IX	36	Sept. 13, 82 - Sept. 11, 81	
	37		(no coinage)
Cleop. Berenice	1	Sept. 12, 81 - Sept. 11, 80	
Ptolemy XII	1		
	2	Sept. 12, 80 - Sept. 11, 79	
	3	Sept. 12, 79 - Sept. 11, 78	
	4	Sept. 12, 78 - Sept. 10, 77	
	5	Sept. 11, 77 - Sept. 10, 76	
	6	Sept. 11, 76 - Sept. 10, 75	
	7	Sept. 11, 75 - Sept. 10, 74	
	8	Sept. 11, 74 - Sept. 9, 73	
	9	Sept. 10, 73 - Sept. 9, 72	
	10	Sept. 10, 72 - Sept. 9, 71	
	11	Sept. 10, 71 - Sept. 9, 70	(no coinage)
	12	Sept. 10, 70 - Sept. 8, 69	
	13	Sept. 9, 69 - Sept. 8, 68	
	14	Sept. 9, 68 - Sept. 8, 67	
	15	Sept. 9, 67 - Sept. 8, 66	

<i>Ruler</i>	<i>Regnal Year</i>	<i>Dates</i>
	16	Sept. 9, 66 - Sept. 7, 65
	17	Sept. 8, 65 - Sept. 7, 64
	18	Sept. 8, 64 - Sept. 7, 63
	19	Sept. 8, 63 - Sept. 7, 62
	20	Sept. 8, 62 - Sept. 6, 61
	21	Sept. 7, 61 - Sept. 6, 60
	22	Sept. 7, 60 - Sept. 6, 59
	23	Sept. 7, 59 - Sept. 6, 58
	24	Sept. 7, 58 - Sept. 5, 57 (?)
	25-26	Sept. 6, 57 - Sept. 5, 55 (no coinage)

5TH PERIOD

Ptolemy XII	27	Sept. 6, 55 - Sept. 5, 54	
	28	Sept. 6, 54 - Sept. 4, 53	(also portrait drachms)
	29	Sept. 5, 53 - Sept. 4, 52	
	30	Sept. 5, 52 - Sept. 4, 51	(?)
Cleopatra VII	1		
	2	Sept. 5, 51 - Sept. 4, 50	
	3	Sept. 5, 50 - Sept. 3, 49	
	4	Sept. 4, 49 - Sept. 3, 48	
	5	Sept. 4, 48 - Sept. 3, 47	(no coinage)
	6	Sept. 4, 47 - Sept. 3, 46	(portrait drachms)
Cleopatra VII	7	Sept. 4, 46 - Sept. 2, 45	(no coinage)
	8	Sept. 3, 45 - Sept. 2, 44	
	9	Sept. 3, 44 - Sept. 2, 43	
	10	Sept. 3, 43 - Sept. 2, 42	
	11	Sept. 3, 42 - Sept. 1, 41	(also portrait drachms)
	12	Sept. 2, 41 - Sept. 1, 40	
	13	Sept. 2, 40 - Sept. 1, 39	
	14	Sept. 2, 39 - Sept. 1, 38	
Caesarion	15	Sept. 2, 38 - Aug. 31, 37	
	16	Sept. 1, 37 - Aug. 31, 36	
	1		

<i>Ruler</i>	<i>Regnal Yaer</i>	<i>Dates</i>
Cleopatra VII	17	Sept. 1, 36 - Aug. 31, 35
	18	Sept. 1, 35 - Aug. 31, 34
	19	Sept. 1, 34 - Aug. 30, 33
	20	Aug. 31 33 - Aug. 30, 32
	21	Aug. 31, 32 - Aug. 30, 31 (no coinage)
	22	Aug. 31, 31 - Aug. 30, 30
Caesarion	7	

KEY TO THE PLATES

(all the coins are silver tetradrachms of Alexandria)

PLATE II

1. Ptolemy VI, year 27 (155/4); Paris, 14.23 gm.
2. Ptolemy VI, year 35 (147/6); Paris, 14.07 gm.
3. Ptolemy VI, year 36 (146/5); ANS, 14.09 gm.
4. Ptolemy VI and Ptolemy VII, year 36 and 1 (146/5); ANS, 14.27 gm.
5. Ptolemy VI, year 36 (146/5); ANS, 13.61 gm.
6. Ptolemy VIII, year 25 (146/5); ANS, 14.27 gm.
7. Ptolemy VIII, year 39 (132/1); British Museum, 14.36 gm.

PLATE III

1. Ptolemy VIII, year 40 (131/0); Brussels, 13.45 gm.
2. Ptolemy VIII, year 43 (128/7); Berlin, 14.26 gm.
3. Ptolemy VIII, year 54 (117/6); ANS, 13.95 gm.
4. Cleopatra III and Ptolemy IX, year 1 (117/6); Copenhagen, 13.37 gm.
5. Cleopatra III and Ptolemy IX, year 10 (108/7); Berlin, 14.50 gm.
6. Cleopatra III and Ptolemy X, year 11 and 8 (107/6); Berlin, 13.50 gm.
7. Cleopatra III and Ptolemy X, year 16 and 13 (102/1); Copenhagen, 13.77 gm.
8. Ptolemy X, year 13 (102/1); ANS, 12.16 gm.

PLATE IV

See above pp. 13-4.

PLATE V

1. Ptolemy IX, year 36 (82/1); Athens, 14.02 gm.
2. Cleopatra Berenice or Ptolemy XII, year 1 (81/0); ANS, 14.16 gm.
3. Ptolemy XII, year 23 (59/8); ANS, 12.87 gm.
4. Ptolemy XII, year 24? (58/7); ANS, 13.42 gm.
5. Ptolemy XII, year 27 (55/4); Berlin, 12.35 gm.
6. Ptolemy XII, year 28 (54/3); Copenhagen, 12.85 gm.
7. Ptolemy XII, year 30 (52/1); Copenhagen, 9.23 gm.

PLATE VI

1. Cleopatra VII, year 2 (51/0); ANS, 13.30 gm.
2. Cleopatra VII, year 11 (42/1); Berlin, 13.56 gm.
3. Cleopatra VII, year 12 (41/0); ANS, 13.86 gm.
4. Cleopatra VII, year 16 (37/6); Berlin, 13.17 gm.
5. Caesarion, year 1 (37/6); ANS, 13.88 gm.
6. Cleopatra VII, year 22 (31/0); Copenhagen, 12.51 gm.
7. Caesarion, year 7 (31/0); Berlin, 13.65 gm.

THE METHOD OF COUNTERFEITING ANCIENT COINS
OF THE BOSPORUS BY M. SAZONOV AS TOLD
BY HIMSELF¹

Translation and Commentary
KONSTANTIN V. GOLENKO

Wishing to launch the sale of some very rare or entirely non-existent ancient coin, I would carve out first its obverse side on a square, quite thick iron plate, and afterward the reverse side on an iron cylinder with a diameter equal to that of the coin that was being cut out. In order to smooth out the sharp features of the images that had been cut out, I would rub them several times with sulphuric acid or with aqua regia,² and would temper them a bit by fire (much tempering might have made them brittle). After having driven the cylinder, one end of which had been sharpened, into a stump of a tree (using the sharpened end for the purpose), I would fashion out of pure gold, without alloy, a little ball whose weight corresponded to that of the coin I was counterfeiting. After having dipped the somewhat flattened ball in sulphuric acid, I would place it on the aforesaid cylinder; then, after having covered it

¹ This "confession," dated June 19, 1876, is now in the archives of the Museum of Antiquities of the city of Kerch, in the eastern Crimea, and first appeared in print in *Izvestiia Tavricheskoï uchenoi arkhivnoi komissii* [Proceedings of the Tauric Scientific Archives Commission] Vol. 21 No. 40 (Simferopol, 1907), pp. 61–3. It was made by a former cavalry captain of the Kerch frontier guard and was written down by Efim Efimovich Liutsenko, brother of Alexander E. Liutsenko, well-known director of the Kerch Museum of Antiquities. E. E. Liutsenko collected coins, resided permanently in Tiflis, had a thorough knowledge of the antiquarian markets of the Crimea and the Caucasus; the "confession" was printed by V. Shkorpil. Liutsenko knew well many Russian archaeologists and numismatists, whose satirical portraits he presented in verse in an "Archaeological Ode" published posthumously. [Proceedings of the Tauric Scientific Archives Commission] Vol. 24 No. 44 (Simferopol, 1910), pp. 66–82.

² Aqua regia is a mixture of nitric and hydrochloric acids in the proportion of one to three.

with the square on which there was portrayed the other side of the coin, I would strike the square with the hammer using quite a bit of force. The hammer, however, weighed no more than 2 1/2 pounds. Since after these blows the square would jump off its place and the coin would not be completely stamped, I would, after having passed the ball through a flame and having adjusted it to both stamps, strike the cylinder with the hammer, and keep repeating this operation until the impressions came out clear and distinct. Stamped in this manner, the coin through unevenness and little cracks on its edges (a result much aided by the softness of pure gold) greatly resembled an ancient coin.

This method I also used for silver coins, but I seldom did so. For the most part, for silver and copper coins I would take an ordinary Greek coin, not a rare one, and one comparable in size to the coin that I intended to produce, and after having smoothed out or knocked off the art work on it, repeat the same operation I had performed on the gold coins. I did not touch the antique patina or the metal oxide that had been on the coins, and therefore the counterfeit money made by me fooled even certain connoisseurs who failed to understand at first this new method of counterfeiting. In the course of some three months in 1868 and 1869 I made dies of up to fifty Bosphorus coins of different denominations; but I did not keep their impressions, sawing off each time the engraving I had made and using the iron plate and cylinder for the new coin. In making up the drawing (design) of the coin, I was guided for the most part by the work of Spasskiĭ entitled "Bosphorus Cimmerius"³ and on rare occasions by the rare genuine coins which I happened to see on sale. I minted them in the smallest quantities: three, four, and seldom more than seven, in order not to convert them into common ones and not to lower their price. I would sell them in Odessa where there were the greatest number of people who liked antique coins. Messrs. Kuris, Lemme,⁴ Fedorovich and others, and in Kherson

³ Grigoriĭ Spasskiĭ, *Bosfor Kimmeriĭskii s ego drevnostiâmi i dostopamiâtnostiâmi* [Bosphorus Cimmerius with its antiquities and memorabilia] (Moscow, 1846).

⁴ The collections of Kuris and Lemme were sold abroad after their owners' deaths, but printed catalogues exist. For the Kuris collection see *Catalogue d'une collection des monnaies composant la collection de M.****, Paris, 1879. For Lemme, see W.

Mr. Burachkov⁶ paid me well. I recall having fabricated up to five golden Asanders,⁶ two silver Polemons, one with the likeness of his wife Trifena,⁷ and many small ones that had then just appeared in the numismatic arena, autonomous Bosphorus coins.⁸ I made three silver copies (specimens) of Spartocus,⁹ of which one was sold to Mr. Kuris. A large quantity of small coins found its way into Mr. Lemme's collection.

F[röhner], *Catalogue des médailles du Bosphore Cimmérien formant la collection de M. Jules Lemmé à Odessa* (Paris, 1872).

⁶ One of the largest Russian collections, Burachkov's, is now in the State Historical Museum in Moscow. The owner prepared a catalogue: P. Burachkov, *Obshchiĭ katalog monet, prinalozhashchikh ėllinskim koloniām, sushchestvovavshim v drevnosti na Severnom beregu Chernogo moriā, v predelakh nyneshnei ĭuzhnoi Rossii* [Catalogue of coins belonging to the Hellenic colonies that existed in ancient times on the north shore of the Black Sea, within the confines of present-day southern Russia], Part 1 (Odessa, 1884). This is the basic atlas of coins of the northern coastal sections of the Black Sea, but contains numerous inaccuracies and errors, which elicited the appearance of a work by A. L. Berthier - de la Garde, *Popravki obshchego kataloga monet* [Corrections of the general catalogue of coins] (Moscow, 1907), containing corrections of attribution, description and coin weight, and also indicating counterfeit specimens.

⁶ K. V. Golenko considers some Asander staters were fabricated by Sazonov. See "O nekotorykh staterakh Asandra 20 goda pravleniā," [On some staters of Asander of the 20th year of his reign], *NE* 1972, pp. 103-7.

⁷ These counterfeits are not known in collections. For genuine types, see E. Babelon and T. Reinach, *Recueil général des monnaies grecques d'Asie Mineure* Vol. 1 Pt. 1 (Paris, 1925), pl. 3, nos. 13, 17-19.

⁸ This is a reference to a hoard of coins found in 1870 at Nymphaeum (*IGCH* 1014), on the Kerch peninsula, which passed through the hands of Sazonov and of another Kerch counterfeiter, Bukzel. In that hoard were found for the first time silver coins with the likeness of an ant, at which Sazonov is apparently hinting here. A. V. Oreshnikov, *Izvestiia Rossiiskoi Akademii istorii material'noi kul'tury* [Proceedings of the Russian Academy of the History of Material Culture] 2 (Petrograd, now Leningrad, 1922), p. 127, for instance, considers all coins with the image of the ant and the inscription ΠΑΝΤΙ as well as those "issued by Giel" (C. Giel, *Kleine Beiträge zur antiken Numismatik Südrusslands* [Moscow, 1886], pl. 3, nos. 1-14) as counterfeit, the work of Sazonov.

⁹ The genuine coin is unique and now in the State Historical Museum collection. See, for instance, E. H. Minns, *Scythians and Greeks* (Cambridge, England, 1913), pl. 6 no. 15.

Up to five copies of Leucon I,¹⁰ Teiranes and Phareanzes,¹¹ and several counterfeit copies of a Theodosian coin¹² were sold out by me in the shortest possible time.

In addition to these, I released for sale many plates of sheet gold, which I made up in imitation of those which are discovered here in ancient tombs,¹³ and among them a large plate with the likeness of the czar—the almost mythical Saitafarn.¹⁴ I also hammer them out using stamps that I had cut out on Pontic and Paphlagonian coins,¹⁵ which are noted for their particularly strong metal.

About six years have elapsed since I was engaged in this business, but to this day it happens from time to time that coins fabricated by me are sold.

¹⁰ It is now generally thought that the Leucon II coins are of three types; see, for instance, Minns, *Scythians and Greeks*, pl. 6 nos. 16–18. See also note 7 above.

¹¹ The correct reading of the latter name was established after 1882 as Pharsanzes. See A. von Sallet, "Beiträge zur antiken Münz- und Alterthumskunde." *ZNum* 1882, p. 154 f. See also note 7 above.

¹² According to the context, the coin is copper. If this is so, then the coins in question are of the type Minns, *Scythians and Greeks*, pl. 9 no. 7. Counterfeit specimens are not indicated, since Minns did not know Theodosian coppers of other types.

¹³ A footnote to the printed confession says these plates are known as *indikatzii* (plural) or *indikaziia* (singular). See *Drevnosti Bospora Kimmeriiskogo* [Antiquities of Bosphorus Cimmerius] (St. Petersburg, 1854), atlas, tab. 85, nos. 9, 13, 15, 17 and *Izvestiia Imperatorskoï Arkheologicheskoi Kommissii* [Proceedings of the Imperial Archaeological Commission] No. 9 (St. Petersburg, 1904), p. 168, picture no. 55. The term is not quite exact, since Russian archaeological literature customarily applies it to impressions of coins on the thinnest gold foil which are found in Bosphorus (less frequently Tauric Chersonese) burial grounds. What are meant here are the small gold Scythian plates, which frequently had highly artistic images, sewn on clothing. These were made not only by the Scythians, but also by the Greeks for the Scythians.

¹⁴ Spelled *Sentaifarn* in the manuscript, according to a footnote to the printed confession.

¹⁵ The coins discussed here are mainly tetrachalks of the time of Mithradates VI, which are very frequently encountered in finds in the Bosphorus region.

SULLA OR ENDYMION: A RECONSIDERATION OF A DENARIUS OF L. AEMILIUS BUCA

J. RUFUS FEARS

According to Plutarch, the following dream occurred to Sulla on the night before he attacked Sulpicius and Marius in Rome:

... the goddess whom the Romans had learned to worship from the Cappadocians, whether she is Selene or Athena or Enyo, appeared to Sulla as he was sleeping. She handed him a thunderbolt and naming his enemies one by one, she ordered him to strike them. When he did so, all his enemies fell down and vanished. Sulla was encouraged by this dream; and after he told it to his followers at dawn, he marched upon Rome.¹

Since Morell, the reverse scene of a denarius of L. Aemilius Buca, issued in 44 B.C., has been interpreted as a representation of this dream of Sulla.² The obverse shows a Venus head, while the reverse portrays

¹ Plutarch, *Sulla* 9.7–9. The text is that of Sintenis (ed. minor, Teubner 1873–5) and Bekker (Tauchnitz 1855–7), which has been consistently used by writers on this question. However, see below, pp. 33–4.

² E. A. Sydenham, *The Coinage of the Roman Republic* (London, 1952), No. 1064. Sydenham follows a host of numismatists in identifying this scene as a portrayal of the dream of Sulla. So A. Morell, *Specimen rei nummariae antiquae* (Leipzig, 1695), p. 236; I. Eckhel, *Doctrina numorum veterum*, Part 2 Vol. 5 (Vienna, 1795), p. 121; H. Cohen, *Description générale des monnaies de la république romaine* (Paris, 1857), pp. 10, 14; B. Borghesi, *Oeuvres complètes* 1 (Paris, 1862), p. 422; C. Cavedoni, "Bulletin bibliographique," *RN* 1857, p. 189; H. Grueber, *Coins of the Roman Republic in the British Museum* 1 (London, 1910), pp. 545–6; C. Oman, "Sulla or Endymion," *NC* 1926, pp. 36–42; N. Breitenstein, "Sulla's Dream," *Acta Archaeologica* (Copenhagen, 1937), pp. 181–6; M.-L. Vollenweider, "Der Traum des Sulla Felix," *SNR* 39 (1958), pp. 22–34; A. Alföldi, "Der machterhellende Traum des Sulla," *JbBernHistMus* 1961–2, pp. 275–88. As Mommsen suggested in *Römisches Münzwesen* (Leipzig, 1850), p. 653, L. Aemilius Buca is probably to be identified with the son of Sulla's stepson, M. Aemilius Scaurus, mentioned by Asconius, *Oratorum*

1. a reclining male, resting his back against a rock and supporting his head on his left hand. The trunk of his body is naked, while a garment is draped around his lower limbs. From the right, Selene, identified by the crescent on her head, descends towards him. With her right hand, she extends a torch, while her left hand and right foot rest upon a projecting rock. Between man and goddess, in the background, stands a winged adult female figure, clad in long drapery; in her raised right hand she holds an object variously identified as a palm branch or staff.

A paste of violet glass in the National Museum, Copenhagen, bears a scene identical to that on the reverse of the denarius of Buca. Selene's descent to the sleeping figure, with the winged female absent, is also found on a series of engraved gems dating to the late Republic. Interpreting all these as representations of the dream of Sulla, Breitenstein, Vollenweider, and Alföldi have argued that the scene of the Copenhagen paste was taken from Sulla's own signet ring and that, in honor of Sulla, Buca used this as the reverse type on his denarius. The other late Republican gems portraying Selene and the sleeping figure are dated to Sulla's own lifetime by Vollenweider, who argued that such gems were carried by Sulla's troops as a pledge of the *felicitas* of their general.³

Throughout his career, of course, Sulla thought of himself as the special favorite of the gods, as Sulla Felix. In particular, his success was due to the divine patronage of Venus.⁴ Dreams and portents were signs which the gods used to assure Sulla of their favor and to indicate to him a proper course of action.⁵ In the dream of Sulla related by Plutarch, the Cappadocian goddess appeared to Sulla, encouraged him,

Ciceronis quinque enarratio, edited by A. Kiessling and R. Schoell (Berlin, 1875), p. 25. So too Klebs, *RE* 1 (1894), p. 548.

³ Breitenstein, *Acta Archaeologica* 1937, pp. 183–5; Vollenweider, *SNR* 39 (1958), pp. 22–33; Alföldi, *JbBernHistMus* 1961–2, p. 282. The present article could not have been written without the stimulus of these three extremely valuable studies.

⁴ For discussion, with the earlier literature, of Sulla Felix, see, especially, J. P. V. D. Balsdon, "Sulla Felix," *JRS* 1951, pp. 1–10; E. Badian, "From the Gracchi to Sulla," *Historia* 1962, p. 229; B. Wosnik, *Untersuchungen zur Geschichte Sullas* (Bonn, 1963), pp. 25–33; and T. Hölscher, *Victoria Romana* (Mainz am Rhein, 1967), pp. 142–3. For Sulla's relations with Venus, see especially R. Schilling, *La religion romaine de Vénus* (Paris, 1954), pp. 272–96.

⁵ Plutarch, *Sulla* 6.8; *Lucullus* 23.6.

and actually invested him with the divine power through which his enemies were vanquished. Sulla's victory over the Marians elevated him to a position of leadership in the commonwealth, and in that sense the Cappadocian goddess could be said to have elected Sulla as *princeps*. Seen in this context, the scene on the Copenhagen paste and on the reverse of the denarius of Buca, if rightly interpreted as the dream of Sulla, represents the first statement in Roman art of the concept of the divine election of the ruler; and, as Vollenweider and Alföldi have argued, this coin becomes a fundamental document in the development of imperial ideology and in the history of kingship by the grace of god.⁶

Unfortunately there are several difficulties, hitherto given little attention, which taken together would seem to exclude an identification of the scene under discussion with the dream of Sulla. In the first place, Plutarch's account differs in almost every respect from the representation on the coin.⁷ According to Plutarch, the goddess gave a thunderbolt to Sulla. On the coin and gems there is no thunderbolt, and instead Selene brandishes her traditional attribute, the torch.⁸ Second, the whole tone of Sulla's dream is warlike. Sulla is given a thunderbolt by a warrior goddess, and with it he vanquishes his enemies. However, there is nothing martial about the scene on the denarius and the gems. There is no evidence of battle or victory. As Alföldi has shown from a detailed examination of almost every extant copy of the denarius, the winged figure does not carry a palm branch.⁹ Neither the sleeping figure nor Selene wears armor or bears weapons. The Cappadocian goddess,

⁶ Vollenweider, *SNR* 39 (1958), p. 31; Alföldi, *JbBernHistMus* 1961-2, pp. 284-6.

⁷ Breitenstein, *Acta Archaeologica* 1937, pp. 182-3, faces this difficulty, arguing that the engraver produced a very free representation, because he was working from a verbal account. However, the discrepancies are too many and too fundamental to be explained in this fashion.

⁸ The torch was a common astral symbol in Greek and Roman cults. See G. Vassits, *Die Fackel im Kult und Kunst der Griechen* (Diss., Munich, 1900), pp. 59-64; J. Gagé, "Fackel," *Reallexikon für Antike und Christentum* 7 (Stuttgart, 1969), pp. 158-60.

⁹ Alföldi, *JbBernHistMus* 1961-2, pp. 275-85. Even on the limited surface of a denarius a palm branch could be quite clearly represented; and as a comparison of the denarius of Buca with those of L. Plaetorius Cestianus, Sydenham 792, and of M. Pobllicius, Sydenham 1035, shows, the object held in the hand of the winged figure cannot be a palm branch.

Ma, was a warrior goddess. At Rome she was identified with Bellona and always portrayed in arms. In the very passage in question, Plutarch identified her with Enyo and Athena. Athena here must mean *Nikephoros*, for dedications to Ma, in Cappadocian Comana, give her the title *Nikephoros*. Coins from Comana in Pontus, one of the goddess' two main cult centers in Asia Minor, portray Ma bearing shield and club.¹⁰

Moreover, we must reject the view that the reverse of the denarius was taken from the signet of Sulla. The seals of Sulla were the subject of considerable discussion in antiquity; two only are described by ancient writers. One represented Bocchus' surrender of Jugurtha to Sulla. The other seal of Sulla, noted in Dio Cassius, portrayed three trophies. Both of these seals were reproduced on denarii issued by Sulla's son Faustus. No ancient writer mentions a signet of Sulla with a scene resembling that on the reverse of the denarius of Buca; and Faustus issued no coins with such a type.¹¹ In this case, the *argumentum ex silentio* seems conclusive.

Since the goddess on the denarius of Buca is not armed, as the Cappadocian goddess should be, since she does not bear a thunderbolt, as Plutarch specifies, and since there is nothing to connect the scene with Sulla, there is no reason iconographically to interpret the type of Buca

¹⁰ For the identification of Ma with Bellona-Enyo, see the material in Hartmann, *RE* 27 (1928), pp. 88–9; and D. Fishwick, "Hastiferi," *JRS* 1967, pp. 145–54. Note especially Hirtius, *Bell. Alex.* 66; and Strabo 12.2.3. For Masas Nikephoros and Aniketos, see W. Waddington, "Inscriptions de la Cataonie," *BCH* 1883, pp. 127–8; and O. Weinreich, "Theoi Epēkooli," *MDAI (Athen)* 37 (1913), pp. 15–6, and 29, n. 1. From Ariarathes III, silver issues of the kings of Cappadocia portray Ma-Athena Nikephoros on the reverse; see B. V. Head, *Historia Numorum* (Oxford, 1911), pp. 750–2. On imperial bronzes of Comana in Pontus under Caligula, the head of Ma, wearing a helmet, appears on the obverse. The reverse has a club. Under Septimius, a bronze issue portrays a temple on the reverse. Within it stands Ma, radiate, holding club and spear (Head, *HN*, p. 498). See also *SNG Deutschland* I pl. 4. A useful discussion of the numismatic and epigraphical evidence is provided by Drexler in W. Roscher, *Ausführliches Lexikon der griechischen und römischen Mythologie* Vol. 2 Pt. 2 (Leipzig, 1894–7), pp. 2220–5.

¹¹ For the seals of Sulla, see Plutarch, *Sulla* 3.8–9; *Marius* 10; *Moralia* 806 D; Pliny, *Hist. Nat.* 37.9; Valerius Maximus 8.14.4; Cassius Dio 42.18.3. The coins of Faustus, with the surrender of Jugurtha and the three trophies, are Sydenham 879 and 884.

as a representation of the dream of Sulla. The only justification for such an interpretation is the presence of Selene on the coin and the fact that, in the text used by earlier writers on this question, Plutarch identifies the Cappadocian goddess with Selene: λέγεται δὲ καὶ κατὰ τοὺς ὕπνου αὐτῷ Σύλλα φανῆναι θεὸν ἣν τιμῶσι Ῥωμαῖοι παρὰ Καππαδόκων μαθόντες, εἴτε δὴ Σελήνην οὔσαν εἴτε Ἀθηνᾶν εἴτε Ἐννώ. However, the Σελήνην is almost certainly false. Based on a correction of *Laurentianus* LXIX.6, earlier editors, among them Sintenis and Bekker, did read Σελήνην. However, more recent editors, notably Ziegler and Flacelière, have followed the unanimous manuscript tradition and read Σεμέλην. Even apart from the testimony of the manuscripts, Semele would seem a more reasonable candidate for identification with Ma. Unlike Aphrodite of Aphrodisias, Ma is not portrayed with the crescent on her head. Furthermore, as an earth mother goddess, whose myth was in some variants localized in Lydia, Semele could quite reasonably be identified with Ma.¹²

Thus the attempt to interpret the reverse of the denarius of Buca as the dream of Sulla, iconographically unsound from the first, should be laid to rest as the unfortunate product of a faulty text. The most likely explanation of the scene is the most obvious. The reverse portrays Selene's descent to her lover Endymion on Mount Latmos.¹³ This identification was proposed by Sabatier, von Sallet, and Babelon, who

¹² For Semele in Lydia, see *Scholia Graeca in Homeri Iliadem* 24.615, edited by W. Dindorf, 4 (Oxford, 1877), p. 358. See also Euripides, *Bacchae* 464. For Semele as an earth mother goddess, see Diodorus 3.62. An inscription from Amasia may indicate that Ma was identified with Ge. See Drexler in Roscher, *Ausführliches Lexikon*, Vol. 2 Pt. 2, p. 2219.

¹³ For representations of the myth of Selene and Endymion in ancient art, an extremely valuable collection of material is given by H. Sichtermann in *Enciclopedia dell'arte antica* 3 (Rome, [1960]), pp. 336–7. For the literary sources, the article by von Sybel in Roscher, *Ausführliches Lexikon* Vol. 1 (Leipzig, 1884–6), pp. 1246–9 is still valuable. See also V. Pestalozza, "Selene e la mitologie lunace nel mondo religioso preellenico," *Acme. Annali della Facoltà di Filosofia e Lettere dell'Università Statale di Milano* 1953, pp. 349–740, and "Aioleis e Kapes nel mito di Endymion," *Archivio glottologico italiano* 39 (Rome/Turin/Florence, 1954), pp. 27–42; and N. von Mossolow, *Endymion* (Diss., Berlin, 1946),.

interpreted the winged figure in the background as Eros.¹⁴ More recent writers have unanimously rejected this interpretation, pointing out rightly that the figure is clearly a full-grown woman in a long garment, not a half-naked baby Eros. Those who interpret the scene as the dream of Sulla generally identify this figure as Nike, bearing a palm branch. However, as Alföldi has shown she carries a baton not a palm branch; and he would identify her as Dike, the maiden who returns as a sign of the golden age made possible by the Sullan victory.¹⁵ However, if the scene is taken as a portrayal of the myth of Selene and Endymion, then a much simpler identification is at hand. She is Aura, the charioteer of Selene, who, in exactly the same form as on the coin of Buca, almost inevitably appears in representations of this myth on Roman reliefs. She is often portrayed bearing a baton in her right hand; and it is this same baton which she holds in her raised right hand on the coin of Buca. On many specimens of the coin it can be seen that Aura holds some object in her left hand. This is perhaps best seen as a very schematic representation of the elongated garland which she often holds on sarcophagi reliefs.¹⁶

¹⁴ J. Sabatier, *Description générale des médaillons contorniates* (Paris, 1860); A. von Sallet, "Die Münzen Caesars mit seinem Bildnis," *ZNum* 1877, pp. 128–9; E. Babelon, *Monnaies de la république romaine* (Paris, 1885), Vol. 1, pp. 123–4 Vol. 2, pp. 23–4.

¹⁵ Alföldi's interpretation of the figure as Dike is based on a disputed identification of the winged female on the Villa Iitem fresco. See M. Nilsson, *The Dionysiac Mysteries of the Hellenistic and Roman Age* (Lund, 1957), pp. 123–5. However, the view of the Villa Iitem figure as Dike has not been generally accepted. See, for example, E. Simon, "Zum Fries der Mysterienvilla bei Pompeji," *JDAI* 1961, pp. 132–6; A. Little, "A Series of Notes in Four Parts on Campanian Megalography, A: the Composition of the Villa Iitem Painting," *AJA* 1963, pp. 191–4; G. Zuntz, "On the Dionysiac Fresco in the Villa dei Misteri at Pompeii," *Proceedings of the British Academy* 49 (London, 1963), pp. 193–7 (reprinted Oxford, 1965); O. Brendel, "Der grosse Fries in der Villa dei Misteri," *JDAI* 1966, pp. 223–30; G. Bendinelli, "Ultima considerazione intorno alla villa pompeiana detta dei Misteri," *Latomus* 27 (1968), pp. 828–9; and R. Turcan, "La démonne ailée de la Villa Iitem," *Hommages à Marcel Renard* 3 (Brussels, 1969), pp. 568–609.

¹⁶ For Aura on sarcophagi reliefs of Selene and Endymion, see the examples in C. Robert, *Die antiken Sarkophagereliefs* (Berlin, 1890–1919), Vol. 3 Pt. 1, p. 15 no. 58; p. 20, no. 77; p. 19, no. 75; pp. 16–17, no. 62; p. 17a, no. 71; p. 15, no. 53; pp. 12–3, no. 47; p. 15, no. 55; p. 23, no. 81; pp. 16–7, no. 64; p. 14, no. 49; p. 72, no. 79. For

There is no need to elaborate upon the correspondence of the portrayal of Selene on the coin with that on reliefs of the myth of Selene and Endymion. There are only two noteworthy points. Her descent from the open air, rather than from the chariot as she is usually portrayed on sarcophagi, recalls Pompeian wall paintings of this scene. On the reverse of the Buca coin and on the gems, Selene bears a torch, which can be taken as the attribute of Selene as well as the marriage torch. Generally on sarcophagi reliefs, an Eros carries the torch for Selene. However, in a small Pompeian wall painting, Selene carries the torch herself; and it is no doubt because of the limited surface of the gems and the denarius, that she is so portrayed in those instances.¹⁷

The pose and drapery of Endymion on the reverse of Buca have many parallels on Roman reliefs and wall paintings.¹⁸ Descriptions of the denarius have generally overlooked the rock, which can be recognized quite clearly on many specimens of the coin. Like Aura, a rock of this sort is an almost invariable component of Roman scenes of the descent of Selene to her lover on Mount Latmos.¹⁹ Indeed, given the small surface of the denarius, Buca's reverse so faithfully reproduces the iconography of Selene and Endymion that it is surprising that this interpretation was ever challenged.

The question of why Buca chose to portray the myth of Selene and Endymion is closely linked to the problem of the date of this issue. Grueber argued that this denarius was struck after the assassination of Caesar. Recent studies of the moneyers of 44 B.C. have dated all of

Aura with the baton see Vol. 3 Pt. 1 p. 15, no. 58; pp. 16–17, no. 64; p. 14, no. 49; For Aura with garlands, see Vol. 3 Pt. 1 pp. 16–7, p. 61. For interpretations of Aura and the garlands in scenes of Selene and Endymion, see especially F. Cumont, *Recherches sur le symbolisme funéraire des romains* (Paris, 1942), p. 250; and H. Sichtermann, *Späte Endymion-Sarkophage* (Baden Baden, 1966), pp. 30–67.

¹⁷ For Selene bearing the torch, see S. Reinach, *Répertoire des peintures grecques et romaines* (Paris, 1922), p. 54, with other examples of Selene and Endymion from Pompeii.

¹⁸ For the pose and drapery of Endymion on the denarius, compare the sarcophagi in Robert, *Sarkophagereliefs* Vol. 3 Pt. 1, p. 15, no. 58; pp. 16–7, no. 64; p. 14, no. 49.

¹⁹ For the representation of the rock on the coin, compare especially the Pompeian paintings in Reinach, *Répertoire*, p. 54.

Buca's issues to before March 15.²⁰ However, their evidence for this is not compelling. As Carson and Weinstock have pointed out, the main argument, that the title *Parens Patriae* and the veiled portrait of Caesar mark posthumous issues, is unconvincing.²¹ It might be emphasized that denarii of P. Sepullius Macer, also issued in 44 B.C., also portray Antony similarly veiled. As on Macer's veiled portrait of Caesar, the priestly implements flank the head of Antony; and the veiled portraits are best taken as simply a complement to the laureate heads of Caesar, emphasizing his position as *Pontifex Maximus*. The title *Parens Patriae* was probably already granted to Caesar in 45 B.C. Like *Imperator*, which also appears on some issues of 44, it offers no clue toward a dating of these issues.²²

Fasti of January 26 still style Caesar *Dictator IIII* and Caesar may not have received the title *Dictator Perpetuus* before February 15.²³ On three issues of Buca, Caesar is called *Dictator Perpetuus*. Moreover, stylistically, the issues of Buca paralleled those of Macer, who, as a denarius with a portrait of Antony on the obverse shows, certainly struck after Caesar's death. It is valid then to assume that Buca was still in office after March 15. Our denarius, with Venus on the obverse, is Buca's only issue of denarii which lacks a portrait of Caesar on the obverse. It is reasonable

²⁰ For the arrangement of the issues of 44 B.C., see Grueber, *Coins of the Roman Republic* 1, p. 545; and more recently, S. Cesano, "La monete di Cesare," *RendPontAcc* 23-4 (1947-9), pp. 147-51; A. Alföldi, *Studien über Caesars Monarchie* (Lund, 1952), p. 5; C. Kraay, "Caesar's Quattorviri of 44 B.C.: the Arrangement of Their Issues," *NC* 1954, pp. 18-31; R. A. G. Carson, "Caesar and the Monarchy," *Greece and Rome* (London 1957), p. 48; and K. Kraft, "Der goldene Kranz Caesars," *JNG* 1952-3, p. 7.

²¹ Carson, *Greece and Rome* 1957, pp. 49-50, who nonetheless dates our denarius to before March 15; S. Weinstock, *Divus Julius* (Oxford, 1971), p. 200, n. 2.

²² Sydenham 1077 (Macer); 1096 (L. Mussidius Longus); 1106 (L. Livinelus Regulus); 1321 (Octavian). For 43 B.C. as the date of the aureus of Octavian, see M. Crawford, *Roman Republican Coin Hoards* (London, 1969), p. 3, tab. 17. A denarius of L. Flaminius Chilo (Sydenham 1089) also has a portrait of Caesar on the obverse; however, its date is disputed, 44, 43, and 42 B.C. all having been suggested as possible dates for the issue. See Weinstock, *Divus Julius*, pp. 394-5, and, for Caesar as *pontifex maximus* and as *parens patriae*, pp. 31, 200-6.

²³ Certainly Caesar was *dictator perpetuus* by February 15. See Cicero, *Phil.* 2.34.87.

to view Caesar's assassination as the explanation for the absence of his portrait and to conclude that this denarius was struck after March 15, 44 B.C.

If, as has been argued here, this denarius of Buca was issued after the assassination of Caesar, then the portrayal of Selene and Endymion on the reverse can be simply explained as a funeral tribute to the dead dictator. The frequent occurrence of this scene on sarcophagi, especially of the third century A.D., points to the allegorical significance of the myth, which perhaps symbolized the private apotheosis of the deceased, borne away in a chariot to be united with divine love in everlasting bliss.²⁴ Already in the very year of Caesar's assassination, Cicero used Endymion to exemplify the eternal felicity of death.²⁵ The entire denarius of Buca may convey an implicit reference to Caesar's apotheosis. The portrait of Venus on the obverse coupled with the reverse scene of Selene and Endymion may suggest that as Selene brought eternal life and felicity to her loved one, so Venus will care for Caesar, whose ancestor Anchises she took as her lover on Mount Ida. It is significant that in Ovid's version of the ascension of Divus Iulius, Venus appeared in the Curia Pompeia and bore his soul to the stars.²⁶

In summary, the reverse of the denarius of L. Aemilius Buca portrays not the dream of Sulla but instead the story of Selene and Endymion. Issued after the assassination of Julius Caesar, it should be seen as a funeral offering to him. Its symbolism may bear upon the apotheosis of Caesar; but it in no way offers any evidence for the development of the concept of rule by the grace of god in the Roman world.²⁷

²⁴ For the significance of the scene of Selene and Endymion of Roman sarcophagi, see Cumont, *Symbolisme funéraire*, pp. 246–50, Sichtermann, *Späte Endymion-Sarkophage*, pp. 82–7; and R. Étienne, "Les sarcophages romains de Saint-Médard," *REA* 55 (1953), pp. 368–70.

²⁵ Cicero, *Tusc.* 38.92.

²⁶ Ovid, *Metamorphoses* 15.843–6.

²⁷ This article was written with the aid of grants from the Penrose Fund of the American Philosophical Society and from Indiana University.

THE TELL KALAK HOARD AND TRAJAN'S ARABIAN MINT

(PLATES VII-XIV)

WILLIAM E. METCALF

In September 1956, the American Numismatic Society acquired the bulk of a large, mixed hoard from Armenak A. Poladian, a Beirut antiquities dealer. The hoard was said to have been contained in a pot unearthed in a village near Amman, Jordan, called "Tell Kalak." It is, unfortunately, impossible to identify "Tell Kalak": no such site was known to the late Henri Seyrig nor to Lankester Harding, then Director of Antiquities in Jordan; nor is the name mentioned in any geography or map of the area. But Seyrig was able to establish through informants that the hoard had come to Beirut from Amman, and thus its approximate provenance is secure.

The hoard consisted of 2,350 coins: 1,985 denarii; 315 drachms, 2 each of Amisus in Pontus and of Lycia, and 311 of types traditionally attributed to Caesarea Cappadociae; 18 tridrachms, also attributed to Caesarea; and 32 tetradrachms of Syrian Antioch. 2,333 pieces were acquired by the ANS; 17 denarii (of which rubbings were provided) were retained by the American University in Beirut. One piece, a denarius, is now missing.

The hoard was initially catalogued shortly after its acquisition by Aline A. Boyce, then Curator of Roman and Byzantine Coins at the ANS; it was subsequently studied by G. L. Kustas, but for reasons unknown has never been published. Their work has made the preparation of the following catalogue immeasurably easier.¹

¹ Reference is made to *Coins of the Roman Empire in the British Museum* for the denarii; for the drachms of Amisus to Waddington, Babelon, and Reinach, *Recueil général des monnaies grecques d'Asie Mineure* I (Paris, 1904); for the coins assigned to Caesarea to E. A. Sydenham's *The Coinage of Caesarea in Cappadocia* (London, 1933; hereafter Syd.); for pre-Hadrianic coinage of Antioch to W. Wruck's *Die syrische Provinzialprägung von Augustus bis Traian* (Stuttgart, 1931); and for all other issues to the appropriate volume of the British Museum Catalogue of Greek Coins.

Illustration has had to be selective; an effort has been made to provide photographs of all rare, or hitherto unpublished or unillustrated varieties. Coins on PLATES VII-XII are from the hoard; on PLATE XIII nos. 2-9, either absent from the hoard or represented only by poor specimens in it, have been selected *exempli gratia* from the collection of the American Numismatic Society.

TELL KALAK HOARD: CATALOGUE

Denarii <i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
NERO	64-8	AVGVSTVS GERMANICVS		
		Nero stg. fr.	60	2
		IVPPITER CVSTOS		
		Jupiter std. l.	74	2
		SALVS		
		Salus std. l.	90	1
			96	1
GALBA	68-9	SPQR OB S C		
		in oak wreath	34	1
OTHO	69	PONT MAX		
		Aequitas stg. l.	6	1
		SECVRITAS P R		
		Securitas stg. l.	17	1
VITELLIUS		CONCORDIA P R		
		Concordia std. l.	1	4
		LIBERTAS RESTITVTA		
		Libertas stg. fr.	13	1
		XV VIR SACR FAC		
		Tripod	17	2
		LIBERTAS RESTITVTA		
		Libertas stg. fr.	31	2
VESPASIAN	69-70	PONT MAXIM		
		Vesta std. r.	33	1
		COS ITER FORT RED		
		Fortuna stg. l.	7	1
		COS ITER TR POT		
		Mars adv. r.	11	1
		Aequitas stg. l.	17	2
		Pax stg. l.	21	1
		Pax std. l.	26	7

TELL KALAK HOARD

41

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		IVDAEA		
	70-1	Jewess std. r.	43	1
		AVGVR - PON MAX		
		Pontifical instruments	48	1
		AVGVR - TRI POT		
		Pontifical instruments	50	2
		TRI POT		
		Vesta std. l.	58	1
		TRI POT II COS III P P		
	72-3	Pax std. l.	61	1
		AVGVR TRI POT		
		Pontifical instruments	64	1
		CONCORDIA AVGVSTI		
		Concordia std. l.	65	2
		VESTA		
		Vesta std. l.	71	2
Titus		NEP RED		
		Neptune stg. r.	80	1
VESPASIAN	73	PONTIF MAXIM		
		Vespasian std. r.	98	1
		SALVS AVG		
		Salus std. l.	105	2
Titus		PONTIF TRI POT		
		Titus std. r.	116	1
Domitian		No legend;		
		Domitian riding l.	129	1
VESPASIAN	74	PON MAX TR P COS V		
		Vespasian std. r.	136	5
		Winged caduceus	137	1
			138	5

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
	75	PON MAX TR P COS VI		
		Pax std. l.	161	19
		Securitas std. l.	165	1
		Victory on cista	169	1
Titus		PONTIF TR P COS IIII		
		Pax std. l.	172	1
VESPASIAN	76	COS VII		
		Eagle on base, hd. r.	179	1
		Eagle on base, hd. l.	180	5
Titus		COS V		
		Eagle on base, hd. l.	191	1
Domitian		COS IIII		
		Pegasus r.	193	6
VESPASIAN	77-8	COS VIII		
		Mars stg. l.	200	1
		Oxen l.	207	2
		Prow r.	210	1
		IMP XIX		
		Modius	216	2
Titus		COS VI		
		Mars stg. l.	221	1
		IMP XIII		
		Sow l.	227	1
Domitian		COS V		
		She-wolf and twins	240	6
VESPASIAN	79	TR POT X COS VIII		
		Ceres std. l.	244	1
Titus		TR POT VIII COS VII		
		Slow quadriga l.	256	1
		Captive r.	258	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
Domitian		PRINCEPS IVVENTVTIS		
		Vesta std. l.	262	2
		Salus stg. r.	265	2
		Clasped hands	269	1
VESPASIAN	75-9	IOVIS CVSTOS		
		Jupiter stg. fr.	276	2
	78-9	ANNONA AVG		
		Annona std. l.	296	4
		CERES AVGVST		
		Ceres stg. l.	300	2
Titus		IOVIS CUSTOS		
		Jupiter stg. fr.	305	3
		Same, but <i>obv.</i> leg. IMP		
		VESPASIAN		
		[] AR (PLATE VII, 1)	cf. 305	1
		ANNONA AVG		
		Annona std. l.	319	2
TRRUS	79	TR POT VIII COS VII		
		Male captive r.	1	1
		TR POT VIII IMP XIII COS VII		
		Male captive r.	5	1
		TR POT VIII IMP XIII COS VII P P		
		Venus stg. r.	9	1
		Rostral column	13	1
		Capricorn l.	22	1
		TR P VIII IMP XV COS VII P P		
		Rostral column	29	1
	80	TR P IX IMP XV COS VIII P P		
		Two captives	37	2
		"Pulvinar"	52	1
			61	2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Curule chair	66	3
		Dolphin	72	1
Domitian		PRINCEPS IVVENTVTIS		
		Minerva adv. r.	86	2
		Goat l.	88	1
		Altar	92	7
	unc.	Vesta std. l.	Vesp. 262 or Titus 83	1
TITUS	79-80	BONVS EVENTVS AVGVSTI		
		Bonus Eventus stg. l.	106	2
Divus Vespasian	80-1	EX S C		
		Victory adv. l.	112	1
		Capricorns supporting shield w. S C	129	6
DOMITIAN	81	TR P COS VII		
		Tripod	4	1
		TR P COS VII DES VIII P P		
		"Pulvinar" (PLATE VII, 2)	17n.	1
		Curule chair	18	1
		Dolphin	20	1
		Tripod	22	3
	82	TR POT COS VIII P P		
		Square table	27	1
	86	IMP XI COS XII CENS P P P		
		Minerva fighting r.	88	1
	90	IMP XXI COS XV CENS P P P		
		Minerva fighting r. on prow	166	1
	90	Minerva l. w. spear	168	1
	90-1	Minerva fighting r. on prow	179	1
		Minerva l. w. thunderbolt	181	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
	92	IMP XXI COS XVI CENS P P P Minerva fighting r.	187	1
		Minerva l. w. spear	194	1
	92-3	IMP XXII COS XVI CENS P P P Minerva fighting r.	200	1
	93-4	Minerva l. w. thunderbolt	218	1
		Minerva l. w. spear	220	1
	95	IMP XXII COS XVII CENS P P P Minerva fighting r. on prow	223	2
		Minerva l. w. spear	235	1
NERVA	96	CONCORDIA EXERCITVVM Clasped hands	8	2
	97		25	1
		COS III P P Pontifical instruments	31	1
		COS III PATER PATRIAE Pontifical instruments	33	1
		FORTVNA P R Fortuna std. l.	41	2
		CONCORDIA EXERCITVVM Clasped hands	53	2
		LIBERTAS PVBLICA Libertas stg. r.	61	1
TRAJAN	98-9	PONT MAX TR POT COS II Vesta std. l.	2	3
		Concordia std. l.	4	5
		Woman std. l.	9	3
		Pax stg. l.	14	3
		Victory std. l.	21	1
		P M TR P COS II P P Vesta std. l.	25	1
		Vesta std. l., veiled	26	1
		Victory std. l.	41	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		TR P COS II P P		
		Woman std. l.	47	1
100		P M TR P COS III P P		
		Vesta std. l. (PLATE VII, 3)	60n.	1
		Concordia std. l.	64	1
		Pax stg. l.	72	2
		Victory std. l.	77	1
101-2		P M TR P COS IIII P P		
		Hercules stg. fr.	86	3
		Hercules stg. fr.; <i>obv.</i> bust w. dr. l. sh. (PLATE VII, 4)	cf. 86	6
		Mars adv. r.	95	2
			96	2
		Woman std. l.	98	2
		Pax stg. l.	100	1
		Victory stg. r.	103	1
			107	4
		Victory stg. fr.	115	4
			120	3
		Victory adv. r.	121	3
			122	2
		Victory std. l.	130	2
103-11		P M TR P COS V P P		
		Dacian captive	151	2
		Trajan stg. l.	154	1
		S P Q R OPTIMO PRINCIPI		
		Ceres stg. l.	156	1
		Mars adv. r.	157	1
		Mars stg. fr.	158	1
			159	2
		Aequitas stg. l.	166	2
		Annona stg. l.	173	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Dacian r.	179	1
			183	1
		Dacian r. w. trophy	187	3
		Fortuna stg. l.; <i>obv.</i> hd. laur.		
		r. (PLATE VII, 5)	cf. 203	2
		Genius stg. l.		
		PLATE VII, 6)	205n.	1
			206	1
			209	2
		Pax stg. l.	212	4
			214	1
		Pax std. l.	216	1
			218	2
		Victory stg. l.	227	1
		Virtus stg. r.	230	3
			233	4
		Trajan stg. fr.	238	3
		COS V P P S P Q R OPTIMO		
		PRINC		
		Roma stg. l.	271	6
		Roma std. l.	276	7
		Aequitas stg. l.	281	15
		Same, but, <i>obv.</i> hd. bare r.		
		(PLATE VII, 7)	281n.	2
		Aequitas std. l.	288	12
		Arabia stg. l.	297	9
		Same, but <i>obv.</i> hd. bare r.		
		(PLATE VII, 8)	297n.	2
		Felicitas stg. l.	301	11
		Felicitas stg. l. w. column	305	7
		Fortuna stg. l.	306	7
		Spes adv. l.	319	3
		Victory inscribing shield	322	1
		Same, but <i>obv.</i> hd. laur. r.		

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		(PLATE VII, 9)	—	1
		Victory stg. l.	328	18
		Victory adv. l.	337	6
		Trophy of arms	359	4
		AET AVG		
		Aeternitas stg. fr.	374	1
		DAC CAP		
		Dacian stg. l.	383	2
		Dacian std. l.	390	1
		(PLATE VII, 10)	390n.	1
		PAX		
		Pax stg. l.	401	2
		PIET		
		Pietas stg. l.	403	3
		VESTA		
		Vesta stg. l.	405	4
111		S P Q R OPTIMO PRINCIPI		
		Victory inscribing DACICA		
		(PLATE VII, 11)	411n.	1
		PAX		
		Pax firing arms		
		(PLATE VII, 12)	p. 88	2
112-7		Mars adv. r.	415	1
		Same, wearing parazonium	418	4
		Felicitas stg. l.	424	3
		Same, but <i>obv.</i> laur. dr. r.		
		(PLATE VII, 13)	—	1
		Genius stg. l.	427	3
			429	2
		Same, but <i>obv.</i> laur. dr. cuir.		
		r. (PLATE VII, 14)	—	1
		Victory inscribing shield	440	1
		Virtus stg. r.	444	2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Trajan riding l.	445	4
		Trajan's column	451	1
			452	3
		S P Q R OPTIMO PRINCIPI		
		Legionary eagle and standards	461	2
		ALIM ITAL		
		Annona stg. fr.	469	2
		Same, corn ears over child	472	2
		ARAB ADQ		
		Arabia stg. fr.	474	2
		FORT RED		
		Fortuna stg. l.	478	1
		VIA TRAIANA		
		Woman reclining r.	486	1
		Same, but <i>obv.</i> bust laur. dr.		
		r. (PLATE VII, 15)	487n.	1
		CONSERVATORI PATRIS PATRIAE		
		Jupiter and Trajan	495	1
		DIVVS PATER TRAIAN		
		Trajan Sr. standing l.	500	2
		P M TR P COS VI P P S P Q R		
		Mars adv. r.	536	9
		Same, but <i>obv.</i> bust with cuir. (PLATE VIII, 1)	—	1
		Felicitas stg. l.	541	10
		Same, but <i>obv.</i> laur. cuir. r. (PLATE VIII, 2)	541n.	1
		Genius stg. l.	549	12
		Virtus stg. r.; <i>obv.</i> w. aegis (PLATE VIII, 3)	564n.	2
		FORT RED		
		Fortuna std. l.	578	9
			581	2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		PRO AVG		
		Providenta stg. fr.	583	2
		Mars adv. r.,	590	3
		Same, but <i>obv.</i> w. aegis (PLATE VIII, 4)	—	1
		Felicitas stg. l.; <i>obv.</i> bust. laur. dr. r. (PLATE VIII, 5)	594n.	1
		Genius stg. l.	598	1
		PRO VID		
		Providentia stg. l.	607	5
		PARTHICO P M TR P COS VI P P S P Q R		
		Mars adv. r.	616	4
		Felicitas stg. l.	626	4
		Same, but <i>obv.</i> bust w. cuir. (PLATE VIII, 6)	626n.	2
		Virtus stg. r.	631	2
		Same, but <i>obv.</i> w. aegis (PLATE VIII, 7)	—	1
		FORT RED		
		Fortuna std. l.	634	2
		PRO VID		
		Providentia stg. l.	640	3
		SALVS AVG		
		Salus stg. l.	645	1
	unc.	Uncertain	—	2
Marciana	113	CONSECRATIO		
		Eagle stg. fr.	650	1
Matidia	—	PIETAS AVGVST		
		Matidia stg. fr.	660	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
HADRIAN	117	PARTHIC DIVI TRAIAN AVG F PM TR P COS P P Trajan and Hadrian CONCORD Concordia std. l. Same, but <i>obv.</i> HADRIANO (PLATE VIII, 8) Same, but <i>obv.</i> dr. l. sh.	2 9 cf. 9 cf. 9	2 1 1 1
	118	PARTH F DIVI NER NEP P M TR P COS CONCORD Concordia std. l. FORT RED Fortuna std. l. IVSTITIA Justitia std. l. PAX Pax stg. l. PIETAS Pietas stg. l. P M TR P COS II AET AVG Aeternitas stg. fr. CONCORD Concordia std. l. FEL AVG Felicitas std. l. FORT RED Fortuna std. l. IVSTITIA Justitia std. l. Same, but <i>obv.</i> bust laur. dr. cuir. (PLATE VIII, 9)	17 20 24 27n. 30 57 61 66 70 71 74 74n.	1 2 1 1 3 2 5 1 1 1 3 1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		PAX		
		Pax stg. l.	78	6
		Same, but <i>obv.</i> bust w. aegis (PLATE VIII, 10)	78n.	1
		PIETAS		
		Pietas stg. l.	82	3
		SALVS AVG		
		Salus std. l.	86	1
		P M TR P COS DES III SALVS AVG		
		Salus std. l.	93	1
HADRIAN	119-38	P M TR P COS III		
		Mars adv. r.	114	5
		Minerva adv. r.	119	1
		Minerva stg. l. "candela- brum" var. (PLATE VIII, 11)	123n.	1
		Roma std. l.	137	2
			139	1
			140	1
			141	2
		Roma stg. l.	147	1
		Aequitas stg. l.	152	4
			154	6
			157	1
			160	2
		Aeternitas stg. fr.	162	3
		Concordia std. l.	164	3
		Felicitas stg. l.	168	3
		Fortuna stg. l.	170	2
		Same, but no column (PLATE VIII, 12)	170n.	1
		Genius stg. l.	178	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Same, but <i>obv.</i> bust dr. laur.		
		r.	cf. 178	1
		Pax stg. l.	194	3
		Same, but <i>obv.</i> bust dr. laur. r.	194n.	1
		Pax std. l.	195	2
		Same, but not veiled		
		(PLATE VIII, 13)	cf. 199	1
		Veiled	200	1
		Not veiled (PLATE VIII, 14)	cf. 200	1
		Pietas stg. fr.	201	1
		Victory flying r.	214	2
			215	2
			217	2
			220	1
		Hadrian stg. l. (PLATE VIII, 15)	237n.	1
		Galley l.	243	1
		AETER AVG		
		Aeternitas stg. l.	249	2
		CLEM		
		Clementia stg. l.	255	2
		CONCORD		
		Concordia std. l.,	259	2
		cornucopiae	260	2
		FEL P R		
		Felicitas std. l.	264	2
			266	1
		HIL - AR PVB		
		Hilaritas stg. fr. (PLATE IX, 1)	280n.	1
		LIB PVB		
		Libertas std. l.	282	1
			284	1
			286	2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		LIB - PVB		
		Libertas stg. l.	289	1
		Same, but <i>obv.</i> bust laur.		
		w. dr. l. sh.	cf. 289	2
		(PLATE IX, 2)		
		PRO AVG		
		Providentia stg. l.	303	2
		PV - DIC		
		Pudicitia stg. fr.	310	1
		SAL AVG		
		Salus std. l.	314	3
			315	2
			316	1
		SALVS AVG		
		Salus std. l.	321	3
		VOT PVB		
		Pietas stg. r.	325	1
ca. 125-8		COS III		
		Diana stg. half-fr.	334	4
		(PLATE IX, 3)	334n.	1
		Hercules std. r.	338	4
		Neptune stg. r.	348	2
		Neptune stg. l.	354	2
		Roma stg. r.	359	4
		Roma stg. l.	361	7
			366	1
		Roma std. r.	367	2
			368	1
		Same, but no shield		
		(PLATE IX, 4)	cf. 368	1
		Roma std. l. on arms	372	1
		Roma std. l. on throne	374	1
		Annona stg. l.	379	2
			385	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Same, w. globe in ex.	387	1
		Concordia std. l.	394	1
		Genius stg. l.	396	4
		Libertas stg. l.	401	2
		Pudicitia stg. l.	405	1
		Pudicitia std. l.	409	1
		Same, w. globe in ex.	414	1
		Spes adv. l.	417	7
		Victoria stg. fr.	422	2
		Victoria std. l.	426	4
		Hadrian stg. r.	428	2
		Eagle stg. fr. on thunderbolt	441	1
		Modius and grain stalks	452	1
		Pontifical instruments	453	4
		Star and crescent	457	2
		Seven stars and crescent	463	5
	128-ca. 132	Minerva stg. r.	474	1
		Roma std. r.	476	3
		Aequitas stg. l.	483	1
		Annona std. l.	488	2
		Pudicitia std. l.	491	3
		Same, w. globe in ex.		
		(PLATE IX, 5)	cf. 491	1
		LIBERALITAS AVG		
		Liberalitas stg. r.		
		(PLATE IX, 6)	523n.	1
		TRANQVILLITAS AVG		
		Tranquillitas stg. l.	526	1
	ca. 132-4	CLEMENTIA AVG COS III P P		
		Clementia stg. l.	536	1
		CLEMENTIA AVG P P/COS III		
		Clementia stg. l.	539	1

Denarii (cont).

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		INDVLGENTIA AVG P P/COS III		
		Indulgentia std. l.	549	1
		IVSTITIA AVG P P/COS III		
		Justitia std. r.; <i>obv.</i> hd. laur.		
		r. (PLATE IX, 7)	555n.	1
		LIBERALITAS AVGCOS III P P		
		Liberalitas stg. r.; <i>obv.</i> bust		
		dr. bare r. (PLATE IX, 8)	559n.	1
		ROMA FELIX COS III P P		
		Roma std. l.	566	1
			567A	1
		SECVR PVB COS III P P		
		Securitas std. l.	572	1
		Same, but <i>obv.</i> bust with		
		dr. l. sh. (PLATE IX, 9) cf.	572	1
		TRANQVILLITAS AVG COS III PP		
		Tranquillitas stg. l.	573	1
ca. 134-8		ADVENTVS AVG		
		Roma stg. l.; <i>obv.</i> bust laur.		
		dr. r. (PLATE IX, 10) cf.	582	1
		AEQVITAS AVG		
		Aequitas stg. l.	590	1
		FELICITAS AVG		
		Felicitas stg. l., branch	605	1
		Same, but cornucopiae	606	1
			608	2
		Felicitas w. Hadrian	616	2
		FELICITAS AVGVSTI		
		Galley l.	621	4
			624	1
		FIDES PVBLICA		
		Fides stg. r.	627	2
			628	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Same, but <i>obv.</i> bust dr. bare r. (PLATE IX, 11)	628n.	1
			630	1
			632	1
		FORT REDVCI		
		Fortuna std. l. but no cornucopiae to r. (PLATE IX, 12) cf. 633		1
		FORTVNAE REDVCI		
		Fortuna std. l.	645	1
		Fortuna and Hadrian	650	1
			653	1
		MONETA AVG		
		Moneta stg. l.	677	5
		Same, but <i>obv.</i> bust w. dr. l. sh. (PLATE IX, 13)	677n.	1
		Moneta stg. l.	680	5
		PIETAS AVG		
		Pietas stg. fr.	685	2
			688	4
		Pietas std. l.	690	2
			691	1
		PROVIDENTIA AVG		
		Providentia stg. l.	694	3
		ROMA FELIX		
		Roma std. l.	704	1
		Same, but <i>obv.</i> bust w. dr. l. sh. (PLATE IX, 14)	704n.	1
		ROMAE AETERNAE		
		Roma std. l.	707	3
		Same but <i>obv.</i> hd. laur. r. (PLATE IX, 15)	707n.	1
		SALVS AVG		
		Salus stg. r.	715	9
			719	3

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Salus stg. l.	721	1
			724	1
			726	2
		Salus std. l.; <i>obv.</i> bust laur.		
		dr. r. (PLATE X, 1)	728n.	1
		TELLVS STABIL		
		Woman stg. l.	741	4
		VENERIS FELICIS		
		Venus std.l.	752	1
			755	1
		Same, w. globe in ex.	756	1
		VICTORIA AVG		
		Victory adv. r.	758	2
			761	2
		Victory std. l.	771	1
		VOTA PVBLICA		
		Hadrian stg. l.	777	3
			780	1
		AEGYPTOS		
		Aegyptus recl. l.	797	3
		Same, w. ibis on column		
		(PLATE X, 2)	801n.	1
		Aegyptus recl. l.; <i>obv.</i> head		
		laur. l. (PLATE X, 3) cf. 801		1
		AFRICA		
		Africa recl. l.	816	1
		ALEXANDRIA		
		Alexandria stg. l.	828	1
		GERMANIA		
		Germania stg. l.	837	1
			838	2
		HISPANIA		
		Hispania recl. l.	846	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		NILVS		
		Nilus recl. r.	863	1
		RESTITVTORI HISPANIAE		
		Hadrian and Hispania	883	2
			889	1
Sabina	128–38	CONCORDIA AVG		
		Concordia std. l.	895	7
		Same, but no cornucopiae	897	1
		PIETAS AVG		
		Pietas std. l. (PLATE X, 4) p. 355*		1
		PVDICITIA		
		Pudicitia stg. l.	912	1
		No legend		
		Venus Victrix stg. r.	920	1
		CONCORDIA AVG		
		Concordia stg. l.	929	5
		Concordia std. l.	933	1
		IVNONI REGINAE		
		Juno stg. l.	940	4
Aelius	137	TR POT COS II		
		Felicitas stg. l.	969	2
		Salus stg. l. (PLATE X, 5)	977n.	1
		CONCORD		
		Concordia std. l.	981	4
Antoninus Caesar	138	TRIB POT COS		
		Diana stg. r.	1006	2
		Minerva stg. l.	1007	1
		Felicitas stg. l. (PLATE X, 6)	1012n.	1
		Pietas stg. l.	1015	1
ANTONINUS	138	PONT MAX TR POT COS		
		Aequitas stg. l.	5	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		AVG PIVS P M TR P COS DES II		
		Diana stg. r.	8	3
		Minerva stg. l.	10	1
		Fides stg. r.	23	3
	139	AVG PIVS P M TR P COS II		
		Fides Militum stg. fr.		
		(PLATE X, 7)	p. 11 §	1
		Victory adv. r.	60	1
		Victory adv. l. (PLATE X, 8)	—	1
		Clasped hands	78	1
		CLEMENTIA AVG		
		Clementia stg. l.	81	1
		Same, but <i>obv.</i> hd. laur. r.		
		(PLATE X, 9)	cf. 81	1
		TR P COS II		
		Pax stg. l.	83	2
		Clasped hands	84	1
		Modius w. grain stalks and poppy	88	1
		TR POT COS II		
		Minerva adv. r.	95	1
		Fortuna stg. l., rudder on globe	101	1
		Fortuna stg. l.	102	1
		Pax stg. l.	105	1
		Clasped hands	112	4
			114	1
		Modius w. grain stalks (PLATE X, 10)	116n.	1
Faustina I	139–40	CONCORDIA AVG		
		Concordia stg. l., no column		
			cf. 133	1
		IVNONI REGINAE		

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Juno stg. l.	136	2
		Throne and peacock	139	1
		VESTA		
		Vesta std. l.	p. 24†	1
ANTONINUS	140–4	AEQVITAS AVG		
		Aequitas stg. l.	172	1
			173	8
		ANNONA AVG		
		Modius w. grain stalks and poppy	181	4
			182	1
		APOLLINI AVGVSTO		
		Apollo stg. l.	186	1
			189	4
		CLEMENTIA AVG		
		Clementia stg. l.	194	4
		GENIO SENATVS		
		Genius of Senate stg. l.	204	3
		Genius of Senate stg. fr.	207	1
		ITALIA		
		Italia std. l.	213	1
		PAX AVG		
		Pax stg. l.	222	3
		PROVIDENTIAE DEORVM		
		Winged thunderbolt	225	1
		TR P COS III		
		She wolf and twins; <i>obv.</i>		
		bust w. dr. l. sh. (PLATE X, 11)	cf. 232	1
		TR POT COS III		
		Clementia std. l.	233	1
		Italia std. l.	234	1
		She wolf and twins	245	2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		ITALIA		
		Italia std. l.	246	1
		VIRTVS AVG		
		Virtus stg. fr.	255	2
M. Aurelius		HONOS		
		Honor stg. l.	264	3
		IVVENTAS		
		Juventas stg. l.	271	3
		IVVENTAS		
		Juventas stg. l.	273	3
		PIETAS AVG		
		Pontifical instruments	277	7
Diva Faustina	141–	AETERNITAS		
		Juno stg. fr.	280	6
		Providentia stg. l.	288	3
			291	1
		CONCORDIAE		
		Antoninus and Faustina	298	2
		CONSECRATIO		
		Ceres stg. l.	301	2
		PIETAS AVG		
		Pietas stg. l., altar	311	11
		Pietas stg. l., candelabrum	315	8
		Hexastyle temple	320	2
		AED DIV FAVSTINAE		
		Hexastyle temple	341	1
		AETERNITAS		
		Juno stg. fr.	345	12
			353	1
		Aeternitas stg. l.	354	6
		Fortuna stg. l.	360	4
		Providentia stg. fr.	373	20
			379	1

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Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Throne and peacock	384	3
			388	1
		AVGVSTA		
		Ceres stg. r.	389	5
		Ceres stg. l., torch and scepter	399	13
		Same, but <i>obv.</i> DIVA AVG		
		FAVSTINA cf. 399		1
		Ceres stg. l., torch and stalks	409	16
		Ceres stg. l., torch	416	2
			420	2
		AVGVSTA		
		Ceres stg. fr.	421	22
		Juno std. r.	428	3
		Vesta stg. l.	440	4
		Vesta std. l.	444	5
		Pietas stg. l.	449	2
		CERES		
		Ceres stg. l.	461	7
		Ceres std. l.	465	2
		CONSECRATIO		
		Peacock walking r.	473	4
			476	1
		IVNO		
		Juno stg. l.	481	1
ANTONINUS	143-4?	IMPERATOR II		
		Victory stg. fr.	497	1
	144	COS III DES IIII		
		Victory stg. fr.	505	1
M. Aurelius		COS DES II		
		Honos stg. l.	508	2
ANTONINUS	145-61	COS IIII		
		Aequitas stg. l.	512	3

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Concordia stg. l.	521	9
		Pax stg. l.	527	5
		Clasped hands	530	7
		Winged thunderbolt on throne	536	9
		TEMPLVM DIVI AVG REST		
		Octastyle temple	549	2
		TR POT COS IIII		
		Virtus stg. l.	563	1
		LIB IIII		
		Liberalitas stg. l., abacus	567	4
		Liberalitas stg. l., vexillum	574	3
M. Aurelius	145-60?	COS II		
		Honos stg. l.	594	13
		Spes adv. l.	603	1
			605	1
	146-7	TR POT COS II		
		Spes adv. l.	615	2
ANTONINUS	147-8	COS IIII		
		Annona stg. l.	621	3
		Felicitas stg. l.	p. 89†	1
		Salus stg. l.	622	5
		Same, but no rudder (PLATE X, 12)	622n.	1
M. Aurelius		TR POT II COS II		
		Minerva stg. r.	636	1
			639	1
ANTONINUS	148-9	COS IIII		
		Aequitas stg. l.	655	1
		Annona stg. l.	657	12
		Bonus Eventus stg. l.	661	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Felicitas stg. l.	664	3
		Fortuna stg. l.	668	3
		Same, but no globe	cf. 668	1
		Salus stg. l.	670	4
M. Aurelius		TR POT III COS II		
		Minerva stg. r.	683	6
		Providentia stg. l.	698	3
		CLEM		
		Clementia stg. fr.; <i>obv.</i> leg.		
		M AVRELIVS CAESAR AVG		
		PII F (PLATE X, 13)	703n.	1
ANTONINUS	149-50	COS IIII		
		Fortuna stg. l., rudder on globe	711n.	1
M. Aurelius		TR POT IIII COS II/CLEM		
		Clementia stg. fr.	716	2
ANTONINUS	150-1	COS IIII		
		Bonus Eventus stg. l.	717	2
		Tranquillitas stg. r.	p. 104*	1
		PLATE X, 14)		
		TR POT XIII COS IIII		
		PAX		
		Pax stg. l.	729	4
		PIETAS		
		Pietas stg. fr.	735	2
		TRANQ		
		Tranquillitas stg. r.	736	1
		Same but <i>obv.</i> IMP CAES	736n.	1
		T AEL ANTONINVS		
		AVG P P (PLATE X, 15)	736n.	1
	151-2	TR POT XV COS IIII		
		Vesta stg. l.	740	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		PAX		
		Pax stg. l.	746	1
		TRANQ		
		Tranquillitas stg. r.	757	1
		COS IIII		
		Vesta stg. l.; <i>obv.</i> bust		
		dr. l. sh. (PLATE XI, 1)	cf. 762	1
		Annona stg. l.	765	6
M. Aurelius		TR POT VI COS II		
		Roma stg. l.	775	1
		CLEM		
		Clementia stg. fr.	780	1
ANTONINUS	152-3	COS IIII		
		Vesta stg. l.	782	4
		Annona stg. l.	786	4
		Fortuna stg. r., rudder on		
		globe	790	3
		Same, but no globe		
		(PLATE XI, 2)	790n.	1
		LIBERALITAS VII		
		Liberalitas stg. l.	p. 116†	1
M. Aurelius		TR POT VII COS II		
		Genius Exercitus stg. l.	804	1
		Same, but <i>obv.</i> bust dr. bare		
		r.	804n.	1
ANTONINUS	153-4	COS IIII		
		Vesta stg. l.	806	4
		Same, but <i>obv.</i> head laur. r.		
		(PLATE XI, 3)	806n.	2
		Annona stg. l.	809	5
		Fortuna stg. r.; head bare r.	811n.	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Fortuna stg. r., rudder on globe	cf. 811	1
		LIBERALITAS VII COS IIII		
		Liberalitas stg. l.	819n.	1
M. Aurelius		TR POT VIII COS II		
		Minerva stg. l.	822	1
		Same, but <i>obv.</i> bust dr. l. sh.	cf. 822	1
		Genius Exercitus stg. l.	826	1
ANTONINUS	154-5	COS IIII		
		Vesta stg. l.	829	1
		Annona stg. l.	832	5
		Fortuna stg. r.	834	2
	155-6	TR POT XIX COS IIII		
		Annona std. r.	851	2
		Fortuna stg. r.	853	1
			854	2
		Pax stg. l.	856	1
M. Aurelius		TR POT X COS II		
		Virtus stg. l.	875	2
ANTONINUS	156-7	TR POT XX COS IIII		
		Ceres std. l.	876	3
		Annona std. r.	878	1
		Felicitas std. l.	881	1
		Salus std. l.	882	3
		Tranquillitas stg. r.	883	1
M. Aurelius		TR POT XI COS II		
		Felicitas stg. l.	892	4
		Virtus stg. l.	894	5
			895	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
ANTONINUS	157-8	TR POT XXI COS IIII		
		Annona stg. l.	901	3
		Tranquillitas stg. r.	908	1
		TEMPLVM DIVI AVG REST/COS III		
		Octastyle temple	916	1
M. Aurelius		TR POT XII COS II		
		Felicitas stg. l.	920	3
		Spes adv. l.	922	1
ANTONINUS	158-9	COS IIII		
		FORTVNA OPSEQVENS		
		Fortuna stg. l.	932	1
		TEMPLVM DIVI AVG REST		
		Octastyle temple	939	4
			940	1
		VOTA SOL DECENN II		
		Antoninus stg. l.	949	1
		VOTA SVSCEP DECENN III		
		Antoninus stg. l.	951	2
		VOTA SVSCEPTA DECENN III		
		Antoninus stg. l.	956	6
	159-60	FELIC SAEC		
		Felicitas stg. l.	970	3
		FELICITATI AVG		
		Felicitas stg. l.	972	1
		FORTVNA		
		Fortuna stg. l.	976	1
			979	3
		PACI AVG		
		Pax stg. l.	981	3
		SALVTI AVG		
		Salus stg. l.	988	1

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Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
M. Aurelius		TR POT XIII COS II		
		Mars stg. fr.	996	1
		TR POT XIII COS II DESIG III		
		Mars stg. fr.	1002	1
ANTONINUS	160-1	COS IIII		
		CONG AVG		
		Liberalitas stg. l.	1004	1
		FORTVNA		
		Fortuna stg. r.	1008	1
		PIETATI AVG		
		Pietas stg. l.	1013	1
Faustina II	undated	LAETITIAE PVBLICAE		
		Laetitia stg. l.	1049	3
		PVDICITIA		
		Pudicitia stg. fr.	1051	1
		Concordia stg. fr.	1051n.	1
		Pudicitia stg. l.	1056	1
		VENVS		
		Venus stg. l.	1067	3
		CONCORDIA		
		Concordia std. l.	1078	1
			1086	6
			1088	1
		PVDICITIA		
		Pudicitia stg. l.	1092	2
		AVGVSTI PII FIL		
		Venus stg. l.	1099	6
		Aeternitas stg. l.	1103	1
		Spes stg. fr.	1906	6
M. Aurelius	unc.	TR POT V[
		Minerva stg. fr.	851	
			or 878	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
ANTONINUS	unc.]COS III Annona std. r.	822 or 837	1
M. AURELIUS	161	COS III CONCORD AVG TR P XV Concordia std. l.	4 5	1 1
		FEL TEMP TR P XV Felicitas stg. l.	11	2
		PROV DEOR TR P XV Providentia stg. l.	15	2
		TR POT XV M. Aurelius stg. l. (PLATE XI, 4)	p. 389†	1
L. VERUS		COS II CONCORD AVG Concordia std. l.	27	1
		PROV DEOR TR P Providentia stg. l.	35 37	4 1
Divus Antoninus	161 ?	CONSECRATIO Eagle stg. r. on bar Eagle stg. r. on base Pyre	41 48 58 60	7 4 1 9
		DIVO PIO Divus Antoninus stg. l. Column of Antoninus	65 67 69	1 2 1
		Rectangular altar	71 76	8 1

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Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
Faustina II	161-76	CERES		
		Ceres std. l.	79	2
			81	7
		DIANA LVCIF		
		Diana stg. l.	87	3
		FECVND AVGVSTAE		
		Fecunditas stg. fr.	89	5
		FECVNDITAS		
		Fecunditas stg. fr.	92	12
		HILARITAS		
		Hilaritas stg. l.	100	5
			101	2
		IVNO		
		Juno stg. l.	104	9
			107	3
			111	1
		Juno std. l.	112	1
		IVNONI REGINAE		
		Juno stg. l.	118	5
			120	2
		Juno std. l.	122	4
		LAETITIA		
		Laetitia stg. l.	127	1
		MATRI MAGNAE		
		Cybele std. l.	134	2
		SAECVLI FELICIT		
		Throne	136	5
			139	6
		SALVS		
		Salus stg. l.	141	1
		Salus std. l.	148	2
		VENERI AVGVSTAE		
		Venus std. l.	159	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		VENVS		
		Venus stg. fr.	166	3
			167	1
		VENVS FELIX		
		Venus std. l.	169	1
		VESTA		
		Vesta std. l.	175	2
M. AURELIUS	161-2	COS III		
		CONCORD AVG TR P XVI		
		Concordia std. l.	177	3
			185	2
		PROV DEOR TR P XVI		
		Providentia stg. l.	188	2
			191	2
		CONCORD AVG TR P XVI		
		Concordia std. l.	194	3
		PROV DEOR TR P XVI		
		Providentia stg. l.	196	2
L. VERUS		PROV DEOR TR P II COS II		
		Providentia stg. l.	202	8
M. AURELIUS	162-3	COS III		
		CONCORD AVG TR P XVII		
		Concordia std. l.	209	2
			216	1
		PROV DEOR TR P XVII		
		Providentia stg.l.	218	1
		Same, but <i>obv.</i> bust. cuir.		
		bare r.	218n.	1
		Providentia stg. l.	221	2
L. VERUS		PROV DEOR TR P III COS II	229	2
		Providentia; <i>obv.</i> bust.		
		cuir. bare r. (PLATE XI, 5)	250n.	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
M. AURELIUS	163-4	TR P XVIII COS III		
		Concordia stg. l.		
		P M TR P XVIII COS III		
		Mars stg. r.	261	1
			264	1
L. VERUS		TR P IIII IMP II COS II		
		Mars stg. r.	282	2
Lucilla	164-9?	CONCORDIA		
		Concordia std. l.	305	3
			306	3
		DIANA LVCIFERA		
		Diana stg. r.	310	3
		VENVS		
		Venus stg. l.	322	3
		VESTA		
		Vesta stg. l.	325	4
		VOTA PUBLICA		
		in wreath	329	1
		CONCORDIA		
		Concordia std. l.	333	1
		IVNO REGINA		
		Juno stg. l.	339	2
M. AURELIUS	164-5	P M TR P XIX IMP II COS III		
		Felicitas stg. fr.	360	2
L. VERUS		TR P V IMP III COS II		
		Parthia std. r.	385	3

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
M. AURELIUS	165-6	TR P XX COS III		
		LIB AVG III		
		Pax stg. l.	395	3
		PIETAS AVG		
		Pietas stg. l.	397	2
		PAX AVG		
		Pax stg. l.	400	1
		PAX		
L. VERUS		Pax stg. l.	401	6
		VIC PAR		
		Victory inscribing shield	406	4
		PAX AVG TR P VI COS II		
		Pax stg. l.	420	1
		TR P VI IMP IIII COS II		
		Pax stg. l.	428	2
M. AURELIUS	166-7	TR P XXI IMP IIII COS III		
		Aequitas stg. l.	435	5
		Providentia stg. l.	440	2
L. VERUS		TR P VII IMP IIII COS III		
		Aequitas stg. l.	447	4
M. AURELIUS	167-8	TR P XXII IMP IIII COS III		
		Aequitas stg. l.	453	1
		TR P XXII IMP V COS III		
		FORT RED		
		Fortuna std. l.	459	1
		Aequitas std. l.	468	3
L. VERUS		TR P VIII IMP V COS III		
		FORT RED		
		Fortuna std. l.	477	2
		Aequitas std. l.	478	1
			481	6

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
M. AURELIUS	168-9	FORT RED TR P XXIII IMP V COS III Fortuna std. l.	484	1
		FELICITAS AVG COS III Felicitas stg. fr.	490	5
		LIBERAL AVG V COS III Liberalitas stg. fr.	492	4
		SALVTI AVG COS III Salus stg. fr.	494	5
Divus Verus	169?	CONSECRATIO Eagle on globe	502	1
M. AURELIUS	169-70	COS III Diana stg. fr.	506	3
		Mars adv. r.	509	1
		Fortuna stg. fr.	512	3
		Salus stg. r.	514	1
		LIBERAL AVG V Liberalitas stg. fr.	524	2
		SALVTI AVG Salus stg. fr.	525	4
		VICT AVG Victory adv. l.	532	5
	170-1	Diana stg. fr.	534	1
		Mars adv. r.	535	1
		Same, but <i>obv.</i> IMP M AN- TONINVS AVG TR P XXV, Head laur. r. (PLATE XI, 6)	—	1
		Minerva adv. r.	536	1
		Roma std. l.	537	3
		Victory stg. r.	541	1
		IMP VI Victory std. l.	543	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		VOTA SVSCEP DECENN II		
		M. Aurelius sacrificing r.	554	2
171-2	IMP VI COS III			
		Mars stg. r.	555	2
		Roma std. l.	557	2
		Aequitas stg. fr.	562	1
		Victory stg. fr.		
		(PLATE XI, 7)	563n.	1
172-3		Mars stg. r.; <i>obv.</i> hd. laur. r.		
		(PLATE XI, 8)	568n.	1
		Roma std. l.	569	1
		Victory adv. r.	571	1
		M. Aurelius stg. fr.	576	1
		Trophy of arms, captive r.	578	1
		Same, but captive l.	581	1
		LIBERAL AVG V COS III		
		Liberalitas stg. fr.		
		(PLATE XI, 9)	p. 469*	1
		RELIG AVG IMP VI COS III		
		Mercury stg. fr.	583	
173-4	IMP VI COS III			
		Mars adv. r.	586	1
		M. Aurelius stg. fr.	591	1
		Trophy (PLATE XI, 10)	595	1
		IMP VII COS III		
		Mars adv. r.	604	1
		Felicitas stg. fr.	606	1
		Victory adv. r.; <i>obv.</i> bust		
		laur. r. w. dr. l. sh.		
		(PLATE IX, 11)	609n.	1
174-5		Mars adv. r.	613	1
		Victory std. l.	617	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
COMMODUS	175	PRINC IVVENT		
		Commodus stg. fr.	639	1
		Same, but <i>obv.</i> bust dr. cuir.	640n.	1
		HILARITAS		
		Hilaritas stg. fr.	644	1
		PIETAS AVG		
		Pontifical instruments	647	2
		PRINC IVVENT		
		Commodus stg. fr.	650	1
M. AURELIUS	175-6	TR P XXX IMP VIII COS III		
		FORT DVCI		
		Fortuna std. l. (object under seat obscure) (PLATE XI, 12)	cf. 658	3
		Roma stg. l.	669	3
		Aequitas stg. fr.	672	1
		Felicitas stg. fr.	675	1
		Roma stg. l.	680	2
	176-7?	COS III P P		
		Roma std. l.		
		(PLATE XI, 13)	p. 486*	1
		Annona stg. fr.	691	2
		(PLATE XI, 14)	p. 487*	1
Diva				
Faustina II	176-	CONSECRATIO		
		Peacock stg. r.	714	3
		Throne and peacock	721	1
			724	5
		Altar with horns	725	3
M. AURELIUS	176-7	TR P XXXI IMP VIII COS III P P		
		Felicitas stg. fr.	729	1
		Victory adv. l.	735	2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		PAX AVG		
		Pax stg. fr.	742	1
		TR P XXXI IMP VIII COS III P P		
		Minerva stg. l.		
		(PLATE XI, 15)	p. 495†	1
Commodus		TR POT II COS		
		Victory adv. l.	750	1
COMMODUS		COS P P		
		Roma stg. fr.	763	1
		Salus std. l.; <i>obv.</i> bust laur.		
		dr. cuir. r. (PLATE XII, 1)	766n.	1
		Same, but <i>obv.</i> L AVREL		
		COMMODVS AVG		
		(PLATE XII, 2)	766n.	1
M. AURELIUS	177-8	TR P XXXII IMP VIII COS III P P		
		Mars stg. r.	768	1
		Roma std. l.	770	1
		Annona stg. l., no prow to		
		r. (PLATE XII, 3)	771n.	1
		Salus std. l.	772	4
COMMODUS		TR P IMP II COS P P		
		Salus std. l.	777	3
M. AURELIUS	178-9	TR P XXXIII IMP VIII COS III P P		
		Salus std. l.	784	1
		TR P XXXIII IMP X COS III P P		
		Mars stg. r.	786	3
COMMODUS	179	TR P IIII IMP III COS III P P		
		Fortuna std. l.	796	2
		Victory std. l.; <i>obv.</i> bust dr.		
		laur. r. (PLATE XII, 4) cf. 801		1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
M. AURELIUS	179-80	TR P XXXIII IMP X COS III P P Fortuna std. l.; <i>obv.</i> bust laur. dr. cuir. r. (PLATE XII, 5)	805n.	1
		Victory std. l.; <i>obv.</i> similar bust (PLATE XII, 6)	808n.	1
COMMODUS		TR P V IMP III COS II P P Fortuna std. l.	811	1
		T99 V IM9 III COS III Fortuna std. l. (plated) (PLATE XII, 7)	cf. 811	1
	180	TR P V IMP III COS II P P Roma std. r.; <i>obv.</i> : L AVREL COMMODOVS AVG Bust laur. dr. cuir. r. (PLATE XII, 8)		1
Divus Aurelius		CONSECRATIO Eagle stg. l. on base Eagle stg. r. on globe Eagle stg. r. on thunderbolt Pyre	19 20 22 27	1 1 5 2
Crispina	180-3?	CERES Ceres stg. fr. CONCORDIA Concordia stg. fr. IVNO Juno stg. fr. VENVS Venus stg. fr. VENVS FELIX Venus std. l.	33 36 41 44 50	2 2 4 7 1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
COMMODUS	180-1	TR P VI IMP IIII COS III P P LIB AVG Liberalitas stg. fr. Felicitas stg. fr. Providentia stg. fr.	53 62 66	1 1 2
	181-2	TR P VII IMP IIII COS III P P Mars adv. r. Roma stg. fr. Annona stg. fr. Pax stg. fr. Salus stg. fr.	76 77 79 82 86 88	1 1 4 1 1 1
		TR P VII IMP V COS III P P Salus stg. fr.	94	1
	183	TR P VIII IMP V COS III P P Jupiter std. l.; <i>obv.</i> leg. M COMMODVS ANTON AVG PIVS Providentia stg. fr.	cf. 96 99	1 1
		TR P VIII IMP VI COS IIII Mars adv. r. Minerva adv. r. Roma stg. fr. Roma std. l. Same, but r. h. empty, stag (?) on shield (PLATE XII, 9)	102 103 104 105 cf. 105	1 1 1 2 1
		Providentia stg. fr. Salus stg. fr.	112n. 113	1 1
	183-4	P M TR P VIII IMP VI COS IIII P P Mars stg. r. Minerva adv. r. Felicitas stg. fr. Fides stg. fr.	119 120 122 123	1 1 2 2

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Pax stg. l. w. branch and cornucopiae (PLATE XII, 10)	125	1
		Pax stg. l. firing arms	p. 710†	1
		Victory stg. fr.	127	1
		Victory adv. l.	129	1
		Modius	130	1
		Minerva adv. r.	131	1
		Aequitas stg. fr.	133	1
		Pax stg. fr.	134	2
		TR P VIII IMP VII COS IIII		
		Roma stg. fr.	137	1
			137n.	1
		Felicitas stg. l.; <i>obv.</i> hd. laur. r. (PLATE XII, 11)	cf. 146	1
184-5		P M TR X IMP VII COS IIII P P		
		Jupiter std. l.	151	1
		Roma stg. fr.	154	2
		ANN		
		Annona stg. fr.	157	2
		CONC MIL		
		Concordia Militum stg. fr.; <i>obv.</i> M COMM ANT P		
		FEL AVG BRIT Head laur. r.	159n.	1
		FEL		
		Felicitas stg. l.	p. 717†	1
		FOR RED		
		Fortuna std. l.	161n.	1
186		P M TR P XI IMP VII COS V P P		
		FEL AVG		
		Felicitas stg. fr.	174	1
		LIB AVG VI		
		Liberalitas stg. fr.	175	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
		Jupiter std. l.	182	2
		Victory adv. l.	190	2
		Commodus std. l.	192	1
		NOBILIT AVG		
		Nobilitas stg. r.	cf. p. 726*	2
186-7		P M TR P XII IMP VIII COS V P P		
		AVCT PIET		
		Pietas stg. fr.	207	2
		HILAR AVG		
		Hilaritas stg. fr.	210	1
		IOV EXSVP		
		Jupiter std. l.	213	2
		NOBILIT AVG		
		Nobilitas stg. fr.	217	2
		PVBLIC FEL		
		Felicitas stg. fr.	226	1
		VOT SOL DEC		
		Commodus stg. fr.	229	1
186-9		C V P P PACI AETERNAE		
		Pax std. l.	236	1
187-8		P M TR P XIII IMP VIII COS V P P		
		Aequitas stg. fr.	242	2
		Fortuna std. l.	245	1
		Salus std. l.	250	1
188-9		P M TR P XIII COS V P P		
		IOV IVVEN		
		Jupiter stg. fr.	253	3
		MART PAC		
		Mars stg. fr.	256	1
		MIN VIC		
		Minerva stg. fr.	258	2
		SECVR ORB		
		Securitas std. l.	261	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
	189	IOV IVVEN TR P XIII COS V DES VI Jupiter stg. fr.	264	1
	190	P M TR P XV COS VI APOL MONET Apollo stg. fr.	275	2
		LIB AVG Libertas stg. fr.	278	1
		P M TR P XV IMP VIII COS VI Commodus std. l.	281	1
	190-1	P M TR P XVI COS VI APOL PAL Apollo stg. fr.	292	3
		CONC COM Concordia stg. fr.	296	6
		FIDEI COH Fides stg. fr.	298	2
		MIN AVG Minerva running r.	302	1
		ROM FEL Roma std. l.	305	4
	192	P M TR P XVII COS VII P P LIB AVG Libertas stg. fr.	309	1
		LIB AVG VIII Libertas stg. fr.	312	1
		Fides Militum stg. fr.	317	1
			318	1
		Fortuna Felix stg. fr.	324	2
		Victory adv. l.	329	1
			332	1
	191 ?	FELIC PERPETVAE AVG Commodus stg. l.	337	1
		I O M SPONSOR SEC AVG Jupiter stg. fr.	348	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
DIDIUS				
JULIANUS	193	CONCORD MILIT Concordia stg. fr. (PLATE XII, 12)	2	2
Julia Domna	193-6?	VENERI VICTR Venus stg. r.	49	1
SEPTIMIUS				
SEVERUS	196-7	FORTVNAE REDVCI Fortuna std. l.	161	1
Caracalla	196 or 197-8	PRINCIPI IVVENTVTIS Caracalla stg. l.	210	1
SEPTIMIUS	198	P M TR P VI COS II P P Sol stg. fr.	263	1
Pescennius Niger				
	unc.	FORTVNAE REDVCI Fortuna stg. fr., with wreath and grain stalk; <i>obv.</i> IMP CAES PESC NIGER IVSTI AVG Head laur. r. (PLATE XII, 13)	—	1
SEPTIMIUS				
	194-	LEG XIII GEM M V TR P COS Eagle and standards	371	2
	197	P M TR P V COS II P P Sol stg. fr.	463	1
	194	P M TR P II COS II P P Jupiter std. l.	468	1
Julia Domna	198-209	VENVS FELIX Venus stg. l.	87	1

Denarii (cont.)

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC</i>	<i>No.</i>
CARACALLA	201	PART MAX PONT TR P IIII Trophy and captives	264	1
SEPTIMIUS	198	SALVTI AVGG Salus std. l.	629	1
	—	Obv.: L SEPT SEV AVG IMP PART MA . X Head of Septimius laur. r. Rev.: RACI (sic) AVGVSTI Pax std. l. holding branch and cornucopiae. (Plated)	—	1
ELAGABALUS	219	VICTORIA ANTONINI AVG Victory adv. r.	124	1
	219–20	FIDES MILITVM Fides stg. l.	133	1
		IOVI CONSERVATORI Jupiter stg. l., two standards	140	1
		Same, but with one stand- ard	141	1
	220–2	INVICTVS SACERDOS AVG Elagabalus stg. l.	209	1
Julia Mamaea	222–	IVNO CONSERVATRIX Juno stg. l.	43	1
<i>Amisus, Pontus</i>				
<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>Recueil</i>	<i>No.</i>
HADRIAN	131–2	ΕΤΟΥΡ ΠΕΓ ΑΜΙΕΟΥ ΕΛΕΥΘΕΡΑ Athena Nikephoros stg. fr.	80	1

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>Recueil</i>	<i>No.</i>
	136-7	AMICΟΥ ΕΛΕΥΘΕΡΑ ΕΤΟΥ ΠΙΗ Demeter stg. l.	95	1

Lycia in genere

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC Lycia</i>	<i>No.</i>
TRAJAN	98-9	ΔΗΜ ΕΞ ΥΠΑΤ Β Two lyres	10	2

*Antioch***Tetradrachms**

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>Wruck</i>	<i>No.</i>
NERO	60-1	Σ Ο P Eagle l. on thunderbolt	38	1
	61-2	ΕΤΟΥC ΑΙΡ Ο Eagle on thunderbolt r.	40	3
		Same, but no dot to r.	cf. 40	1
	63-4	ΕΤΟΥΣ ΒΙΡ Ι Eagle on thunderbolt r.	45	2
	unc.	ΕΤΟΥ Eagle on thunderbolt r.	40 or 45	1
OTHO	69	ΕΤΟΥC Α Eagle on branch l.	63	1
VESPASIAN	69/70	ΕΤΟΥΣ ΝΕΟΥ ΙΕΡΟΥ Β Eagle on club. l.	75b	1

TELL KALAK HOARD

87

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>Wruck</i>	<i>No.</i>
		ΕΤΟΥΣ ΝΕΟΥ ΙΕΡΟΥ Β		
		Eagle on club. l.	76	5
			77	1
		Τ ΦΛΑΒΙ ΟΥΕΣΠ ΚΑΙΣ		
		ΕΤΟΥΣ ΝΕΟΥ ΙΕΡΟΥ Β		
		Titus l.	80	1
			81	1
	unc.	Legend effaced, Eagle on club l.	70 or 76	1
TITUS	72/73	ΕΤΟΥΣ Γ ΙΕΡΟΥ		
		Eagle on branch l.	100	1
TRAJAN	103-9?	ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ Ε		
		Head of Heracles r.	150	1
		Tyche std. l.	153	1
	107-8	ΔΗΜΑΡΧ ΕΞ ΙΔ ΥΠΑΤ Ε		
		Eagle l. on club.	155	3
	111-2	ΔΗΜΑΡΧ ΕΞ ΙΣ ΥΠΑΤ Σ		
		Eagle l. on club	161	2
	112-3	ΔΗΜΑΡΧ ΕΞ ΙΖ ΥΠΑΤ Σ		
		Eagle l. on club	164	1
	unc.	Legend effaced	cf. 153	2

<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>BMC Galatia</i>	<i>No.</i>
HADRIAN	unc.	ΔΗΜΑΡΧ ΕΞ ΥΠ[
		Eagle fr. on leg and thigh cf. 304-5		1
	unc.	Obv.: ΑΥΤ Κ ΑΙΣ ΤΡΑΙ ΑΔΡΙΑ- ΝΟC ΑΡΙ CΕΒ ΓΕΡΜ ΔΑΚ ΠΑΡΘ Bust of Hadrian laur. dr. r. Rev.: ΔΗΜΑΡΧ Ε[Eagle fr. on club.	—	1

"Caesarea Cappadociae"

Tridrachms				
<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>Syd.</i>	<i>No.</i>
TRAJAN	103-11	ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ Ε		
		Arabia stg. fr.	182	10
	112-7	ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟΣ		
		Temple of Artemis Pergaea	190	3
		Bundle of six grain stalks	220	1
		Aquila and standards	224	2
			225	1
		Aquila and standards; <i>obv.</i> hd. laur. r.	—	1
Drachms				
<i>Ruler</i>	<i>Date</i>	<i>Reverse</i>	<i>Syd.</i>	<i>No.</i>
DOMITIAN	92-3	ΕΤΟ - ΙΓ		
		Athena stg. r.	125	1
TRAJAN	111-2	ΔΗΜΑΡΧ ΕΞ ΙΣ ΥΠΑΤ Σ		
		Arabia stg. fr.	183	3
			184	53
	112-3	ΔΗΜΑΡΧ ΕΞ ΙΖ ΥΠΑΤ Σ		
		Arabia stg. fr.	185	67
	113-4	ΔΗΜΑΡΧ ΕΞ ΙΗ ΥΠΑΤ Σ		
		Arabia stg. fr.	189	27
	unc.	Date effaced		
		Arabia stg. fr.	—	92
	114-6	ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟΣ		
		Camel l.	204	9
			205	53
		Camel r. (PLATE XIV, 21)	—	2
		Camel l.; <i>obv.</i> bust laur. dr. l. (PLATE XII, 15)	—	4

SUMMARY OF THE HOARD BY REIGN

	<i>Denarii</i>	<i>"Caesarea"</i> <i>dr.</i>	<i>tridr.</i>	<i>Antioch</i> <i>tetradr.</i>	<i>Misc.</i> <i>dr.</i>
NERO	6			8	
GALBA	1				
OTHO	2			1	
VITELLIUS	10				
VESPASIAN	111			10	
TITUS	35			1	
DOMITIAN	21	1			
NERVA	10				
TRAJAN	350	310	18	10	2 of Lycia
HADRIAN	360			2	2 of Amisus
ANTONINUS PIUS	540				
M. AURELIUS/L. VERUS	264				
M. AURELIUS/COMMODUS	115				
COMMODUS	138				
DIDIUS JULIANUS	1				
PESCENNIUS NIGER	1				
SEPTIMUS, alone and with					
CARACALLA	13				
ELAGABALUS	5				
JULIA MAMAEA	1				
TOTALS	1985	311	18	32	4

The latest coin in the hoard is the IVNO CONSERVATRIX issue of Julia Mamaea, which bears no date but has been convincingly assigned to 222 by Carson.² Some lag must be allowed in view of the distance of the find from Rome, but the fresh condition of the later issues shows that it cannot have been great; the hoard was deposited by ca. 225.

² *BMCRE* VI, nos. 48–50.

The meager representation of coins of emperors following Commodus is typical of hoards of this period, though the only available evidence is from the West. Bolin³ first made note of the scarcity of Severan denarii in early 3rd century hoards, and ascribed the phenomenon to their debasement.⁴

What is more suprising is the complete absence of the Syrian tetradrachms of the Severans; the terminal date of the hoard would certainly have allowed for their inclusion, and in view of the numbers in which they were issued it is clear that their exclusion was deliberate. The hoarder exercised the same discrimination with respect to tetradrachms as he had with respect to denarii, and included only those of finest metal, however worn.⁵

The small proportion of Eastern denarii is remarkable. Of the 327 denarii of Hadrian, only 8 (2.4%) would be assigned to Eastern mints by P. V. Hill;⁶ none were attributed to the East by Mattingly.⁷ In addition to these there are the lone denarius of Pescennius Niger, two (possibly three) coins of Septimius,⁸ and perhaps one of Caracalla.⁹ Admittedly the identifiable Eastern issues of Hadrian were far from considerable, and the mingling of Eastern and Western coinage over a century might have minimized their importance even in Eastern hoards; but the Eastern issues of the Severans are generally thought to have

³ S. Bolin, *State and Currency in the Roman Empire to 300 A.D.* (Stockholm, 1958), p. 234 and Table 7, pp. 351-2.

⁴ On the debasement see J. Guey, "L'aloi du denier romain de 177 à 211 après J.-C.; Étude descriptive," *RN* 1962, pp. 73-140; "Peut-on se fier aux essais chimiques? Encore L'aloi du denier romain de 177-211 après J.-C.," *RN* 1965, pp. 110-22.

⁵ B. V. Head, *Historia Numorum* (Oxford 1911), p. 779 remarks on the baseness of the tetradrachms from the time of Caracalla. Tell Kalak's exclusion of rare Antonine issues is not unusual: cf. A. Spljckerman, "A Hoard of Syrian Tetradrachm and Eastern Antoniniani from Capharnaum," *SBF* 1958-9, pp. 282-327, especially 291; and H. Hamburger, "A Hoard of Syrian Tetradrachms and Tyrian Bronze Coins from Gush Halav," *IEJ* 1954, pp. 201-26.

⁶ P. V. Hill, "The Aurei and Denarii of Hadrian from Eastern Mints," *NC* 1966, pp. 135-43.

⁷ *BMCRE* III, nos. 373-381.

⁸ *BMCRE* V, p. 116, no. 463; p. 281, no. 629; p. 116, no. 68 (uncertain mintage).

⁹ *BMCRE* V, p. 54, no. 210 (Rome) or p. 115, no. 48 (East).

been more substantial, and their low representation is striking indeed if all is right with the attributions.¹⁰

The hoard includes two new varieties among the provincial coins:

1. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΡΙCΤΩ CΕΒ ΓΕΡΜ
ΔΑΚ

Bust of Trajan laur. dr. cuir. r., seen from behind.

- Rev.*: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟ C

Two-humped camel r. on exergual line.

2 specimens: 3.32 gm. ↓, 3.01 gm. ↓ (PLATE XIV, 21).

2. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΡΙCΤΩ CΕΒ ΓΕΡΜ
ΔΑΚ

Bust of Trajan laur. dr. cuir. l., seen from behind.

- Rev.*: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟ C

Two-humped camel l. on exergual line.

4 specimens: 3.55 gm. ↓ (PLATE XII, 15), 3.39 gm. ↓
(PLATE XIV, 20), 3.36 gm. ↓, 3.22 gm. ↓.

Sydenham records neither variety, nor did either appear in the large Mampsis hoard.¹¹ Both pieces with camel r. (cat. no. 21 below) are struck from the same reverse die, hence the variety may simply result from an engraver's blunder. An example of the variety with bust of Trajan l. appeared in a sale in 1955, but is otherwise unpublished.¹² The four Tell Kalak specimens are struck from four different die pairs.

The Tell Kalak hoard is similar in components if not in numbers or proportions to several other hoards of Middle Eastern provenance. A Hadrianic hoard from Murabba'ât contained denarii, drachms and didrachms attributed to Caesarea, and coins of the Nabataean kings.¹³ A hoard from Eleutheropolis in Palestine, also buried under Hadrian, included tetradrachms

¹⁰ A similarly small fraction of Eastern denarii of the Severans (1.1%) occurred in a hoard from southwest Turkey reported by S. Bendall, "An Eastern Hoard of Roman Imperial Silver," *NC* 1966, pp. 165–170.

¹¹ A. Negev, "Notes on Some Trajanic Drachms from the Mampsis Hoard," *JNG* 1971, pp. 115–120. The summary on p. 115 supersedes the discussion in *INJ* 3 (1965–6), pp. 27–31.

¹² See cat. no. 20 below.

¹³ J. T. Milik and H. Seyrig, "Trésor monétaire de Murabba'ât," *RN* 1958, pp. 11–26.

of Antioch and Tyre as well as one Lycian drachm and drachms and didrachms assigned to Caesarea.¹⁴ Recently A. Negev has summarized the contents of a large hoard from Mampsis (now Kurnub) in the Negev: its ca. 10,500 coins included over 8,000 tetradrachms of the Severan period, together with earlier denarii and over 2,100 Trajanic drachms attributed to Caesarea.¹⁵ An unpublished hoard from Antioch included tetradrachms of Antioch and Tyre, tridrachms and didrachms assigned to Caesarea, and a few denarii.¹⁶ A Trajanic hoard from Sakha in Egypt contained autonomous Greek silver, denarii and five drachms and hemidrachms thought to be of Caesarean origin.¹⁷

These hoards form a considerable body of evidence that certain types long attributed to Caesarea were not in fact struck there. Tell Kalak's drachms number 310, 242 with *rev.* Arabia and 68 with *rev.* camel. None of the traditional Caesarean types—Eleutheria, Mt. Argaeus, club, Eirene—appear with them. Even more striking in terms of numbers is the Mampsis hoard, which contained 1,838 drachms with *rev.* Arabia and 204 with *rev.* camel, but none of any other type. The smaller Murabba'at hoard included 23 Arabias and 9 camels; the Eleutheropolis hoard 43 Arabias and 5 camels only.

Moreover, those hoards which contain certainly Caesarean types regularly exclude Arabia and camel reverse. A Trajanic hoard from an

¹⁴ S. P. Noe, *A Bibliography of Greek Coin Hoards*, *ANSNM* 78. (New York, 1937), no. 381. J. N. Svoronos, "Heurema Eleutheropoleōs Palaistines," *JIAN* 1907, pp. 230–52.

¹⁵ *JNG* 1971.

¹⁶ Noe, *Bibliography*, no. 56. The latest coin is of Trebonianus Gallus. Since the hoard is unlikely ever to be published fully, I present a summary of its contents as recorded by the late E. T. Newell, who had rubbings of 252 pieces. Nero, 31 tetradrachms (of Antioch, as always, unless otherwise stated); Galba, 5 tetradrachms; Otho, 2 tetradrachms; Vespasian, 44 tetradrachms, 4 denarii; Titus, 1 tetradrachm; Domitian, 8 tetradrachms, 1 denarius; Nerva, 2 tetradrachms; Trajan, 58 tetradrachms; 1 tridrachm (*rev.* Hera) and two didrachms (*rev.* eagle l.) attributed to Caesarea, and 2 denarii; Hadrian, 2 tetradrachms, 3 denarii; Caracalla, 7 tetradrachms of Tyre. The following were represented only by Antiochene tetradrachms: Macrinus, 1; Elagabalus, 1; Gordian III, 2; Philip I, 30; Philip II, 19; Trajan Decius, 8; Herennius Etruscus, 2; Trebonianus Gallus, 4.

¹⁷ Noe, *Bibliography*, no. 889. S. H. Weber, *An Egyptian Hoard of the Second Century, A. D.*, *ANSNM* 54 (New York, 1932), p. 40, nos. 296–300.

unknown site in Asia Minor contained drachms with *rev.* types Mt. Argaeus, club, clasped hands, and Eleutheria, as well as a didrachm with *rev.* club.¹⁸ Another Trajanic hoard, from Caesarea itself, included drachms with *rev.* types Eleutheria, Eirene, and clasped hands, as well as didrachms showing Mt. Argaeus, club, male figure and clasped hands.¹⁹ Neither contained any Arabia or camel reverses. A hoard from Gerzeul in the South Caucasus whose latest coins were of Aurelius and Verus included a large variety of Caesarean drachms and didrachms, but once again no Arabia or camel reverses.²⁰ The pattern was duplicated in a hoard seen in trade by H. Seyrig and never published.²¹ Found at Tokat (near the site of ancient Amasia), it contained only Mt. Argaeus and club drachms.

The evidence of the more substantial hoards is charted in Table I.²²

Clearly two mutually exclusive classes of hoards occur: one containing Arabia and camel drachms (and sometimes tridrachms) and found in

¹⁸ Noe, *Bibliography*, no. 83. H. Mattingly, "A Hoard of Imperial Didrachms and Drachms from Caesarea in Cappadocia," *NC* 1932, pp. 238–9.

¹⁹ Noe, *Bibliography*, no. 179. A. Baldwin, "Un trésor monétaire découvert à Césarée en Cappadoce," *Aréthuse* 17 (1927), pp. 145–72.

²⁰ Noe, *Bibliography*, no. 428. M. M. Ivashchenko, *Gerzeul'skii klad monet kessarii kappadokiiskoi. Izvestiia gosudarstvennaia akademiia istorii material'noi kultury* Vol. 7 No. 10 (Leningrad 1931).

²¹ Millik and Seyrig, "Murabb'ât," p. 25.

²² The hoard evidence summarized in Table I is supplemented by that of site finds and of incidental inclusions of relevant coins in other hoards. For example, an Arabia drachm was found in excavations at Sepphoris, Palestine (C. S. Bunnell in *Preliminary Report of the University of Michigan Excavations at Sepphoris, Palestine, in 1932* [Ann Arbor, 1937], p. 43); another was included in the Gush Ḥalav hoard (cited above, n. 5); and a third was among the coins found at Naḥal Seelim (L. Y. Rahmani, "The Coins from Naḥal Seelim and Naḥal Hardof," *IEJ* 1961 pp., 63–4. Aida S. Arif has kindly shown me photographs of several Arabia and camel drachms in the Museum of Antiquities, Amman; all were local finds. The representation of Trajanic types in the Gerzeul hoard is closely paralleled by coins found in Colchis: see K. V. Golenko, *Denezhnoe obraschenie kolkhidy v rimskoe vremia* (Leningrad, 1964), pp. 66–9, find nos. 17a–22a, 24–25. Drachms found included *rev.* types bust of Artemis (Syd. 198) and clasped hands (Syd. 223); didrachms Mt. Argaeus (Syd. 157), Eleutheria (Syd. 164), clasped hands (Syd. 171), bust of Artemis (Syd. 199), Tyche (Syd. 203, 2 examples), and club (Syd. 214). A club didrachm was recently found near Sochi in the northwest Caucasus: G. K. Shamba, "Pogrebenie II v. is Mastesty," *SA* No. 2 (1970), pp. 232–7.

Summary of Hoards Containing "Caesarean" Issues of Trajan

REVERSE TYPE	HOARDS						
	Tell Kalak	Murabba'at	Eleuthe- ropolls	Mampsis	Sakha*	Asia Minor	Caesarea Gerzeul Tokat
<i>Drachms</i>							
Arabia	242	23	43	1838	1		
Camel	68	9	5	204			
Zeus Ammon		1			3		
Clasped hands							
Mt. Argaeus						1	19 xx
Club						1	6 xx
Bust of Artemis							7
Eleutheria						1	3
Eirene							3
<i>Didrachms</i>							6
"Hera"	3						
Eagle l.	2		4				
Divus Nerva							1
Mt. Argaeus							5
Club						1	11
Female bust							5
Eleutheria							1
Tyche							6
Clasped hands							4
Apollo						1	8
Male figure							1
<i>Tridrachms</i>							
Zeus			1				
Artemis Pergaea	3	1	3				
Aquila and standards	4	1	4				
Araba	10	2	5				
Grain stalks	1	1	1				

* The Sakha hoard also included one hemidrachm with head of Zeus Ammon, whose attribution to Caesarea I hope

Middle Eastern contexts, the other containing drachms of traditional Caesarean type (and sometimes didrachms) and found in Asia Minor. The latter group of coins must have been minted at Caesarea, as is shown by their inclusion of club and Mt. Argaeus types—the one generally, the other exclusively associated with Caesarea. But the hoard evidence conclusively shows that the Arabia and camel drachms can have been minted at Caesarea only if it is argued that they were immediately shipped off for circulation elsewhere.

That argument has been suggested in the past, but can now be proved wrong.²³ Recently A. Negev has noted that several drachms with *rev.* Arabia are overstruck on coins of the Nabataean kings: 9 such drachms were included in the Mampsis hoard. At least seven Arabia drachms from the Tell Kalak hoard seem to be overstruck, and one (PLATE XII, 14) bears traces of the Nabataean legend [ג]מלח אחר[הח].²⁴ There is no evidence whatever that Nabataean coins circulated as far north as Caesarea, and hence no likelihood that they provided the undertypes for truly Caesarean issues.

The evidence of provenance and overstrikes conclusively indicates a mint site in Arabia, and it need hardly be said that this conclusion is supported by typology. The Arabia type is self-explanatory; the camel was used as a symbol of Arabia even in Republican times, appearing on a denarius of M. Scaurus and P. Hypsaeus struck in 58 B.C. and commemorating the surrender of the Nabataean king Aretas five years earlier.²⁵ Perhaps it is no coincidence that the coin was among those restored by Trajan ca. 107, soon after the annexation of the province.²⁶

²³ The consignment theory is put forth by Seyrig, "Murabb'ât," p. 25; K. Regling even suggested that drachms of Lycia were struck at Caesarea "Münzschatz von Theadelphia," *ZNum* 1912, p. 235).

²⁴ Negev, *JNG* 1971. This reading was provided by Dr. Negev; it is found on coins of Rabel II and Gamlat, A.D. 76–106.

²⁵ Sydenham, *The Coinage of the Roman Republic* (London, 1952), nos. 912–914.

²⁶ *BMCRE* III, nos. 140, 25. The connection between the annexation of Arabia is implicit in the remarks of H. Mattingly, "The Restored Coins of Trajan," *NC* 1926, p. 248.

Attribution of both types to Arabia removes the typological difficulties inherent in their assignment to Caesarea. Previous commentators have remarked that, if Caesarean, the Arabia reverse can only have derived from contemporary Roman issues; and Sydenham could only explain the camel reverse as "possibly an abridgement of the Arabia type."²⁷ Although other Caesarean types seem to have Roman antecedents, the "abridgement" of a non-native type and its striking in profusion would be unlikely even if it were not impossible.

For the type itself at once contradicts Sydenham's view of it as an abridgement and supports attribution to Arabia. It has so far gone unnoticed that the camel drachms portray not the native or Arabian dromedary found in company with Arabia on her drachms and tridrachms, but the two-humped Bactrian camel. Though not indigenous, the Bactrian camel must have been a familiar sight in Arabia, through which many important caravan routes to the East passed. More than one historian has seen Trajan's annexation of Arabia as an effort to improve the security of Rome's Eastern trade routes;²⁸ the employment of the Bactrian camel as a type may thus have symbolized the position of the new Provincia Arabia as a secure link between Near and Far East.

Reattribution is consistent with the metrological evidence provided by the 310 Tell Kalak drachms. The weight standard of Caesarean coins is uncertain: Mommsen remarked "La pièce ordinaire ne dépasse pas le poids de 3,56 gr et la double pièce celui de 7,22 gr."²⁹ Wroth³⁰ interpreted this to mean that Mommsen identified a standard of 56.0 gr./3.63 gm. for the Caesarean drachm. Both he and Head³¹ placed the

²⁷ Syd. p. 67 n.

²⁸ R. P. Longden in *Cambridge Ancient History* II (1936), p. 237; E. H. Warmington, *The Commerce between the Roman Empire and India* (Cambridge, 1928), pp. 91-3.

²⁹ T. Mommsen, *Histoire de la monnaie romaine* 3 (Paris, 1873), p. 314; followed by Syd. p. 4.

³⁰ *BMC Galatia*, pp. xxxvi-xxvii.

³¹ Head, *Historia Numorum*, p. 752. J.-P. Callu, *La politique monétaire des empereurs romains de 238 à 311* (Paris, 1969), p. 160 gives a mean weight of 3.27 gm. for 65 Trajanic drachms of Caesarea. As Callu apparently includes Arabian products in the output of Caesarea, the figure should be somewhat higher, as didrachm weights suggest. Fifty pieces in the British Museum, Copenhagen, ANS and von Aulock col-

standard somewhat higher, at 60.0 gr./3.88 gm., on the basis of heavier specimens in the British Museum.

Either is out of the question for the drachms of the Tell Kalak hoard. Not one specimen reaches 3.88 gm.; the heaviest is 3.72 gm. Only 5 specimens (1.6%) reach 3.63 gm. and only 26 (8.5%) exceed 3.40 gm. The median weight is 3.11 gm. and that is approximately the point of concentration achieved by use of a frequency table.

The coins of the Tell Kalak hoard are, of course, quite worn, and this factor must be considered in determining a hypothetical standard. Here comparison with the hoard's denarii, for which the theoretical weight is known (1/96 Roman pound = 3.41 gm.) is illuminating. The denarii show a median weight of 3.26 gm., and their point of concentration is 3.26–3.30 gm., There is no reason to assume that the denarii are either more or less worn than the drachms; yet the frequency curve for the denarii is consistently ca. .15 gm. higher than that of the drachms (Table II). It is likely, therefore, that the standard of Trajan's Arabian drachms was c. .15 gm. lower than that of the denarii; the drachms were thus struck to a theoretical weight of c. 3.25 gm.³²

A further technical point tells against Caesarean origin of the Arabia and camel drachms. The die axis of these drachms is *always* ↓; while this is the regular axis of Caesarean issues, several exceptions are known.³³

lections have a mean weight of 6.83 gm., and on a frequency table show a point of concentration at 6.71–6.80 gm. Ten of the fifty pieces weigh in excess of 7.00 gm.

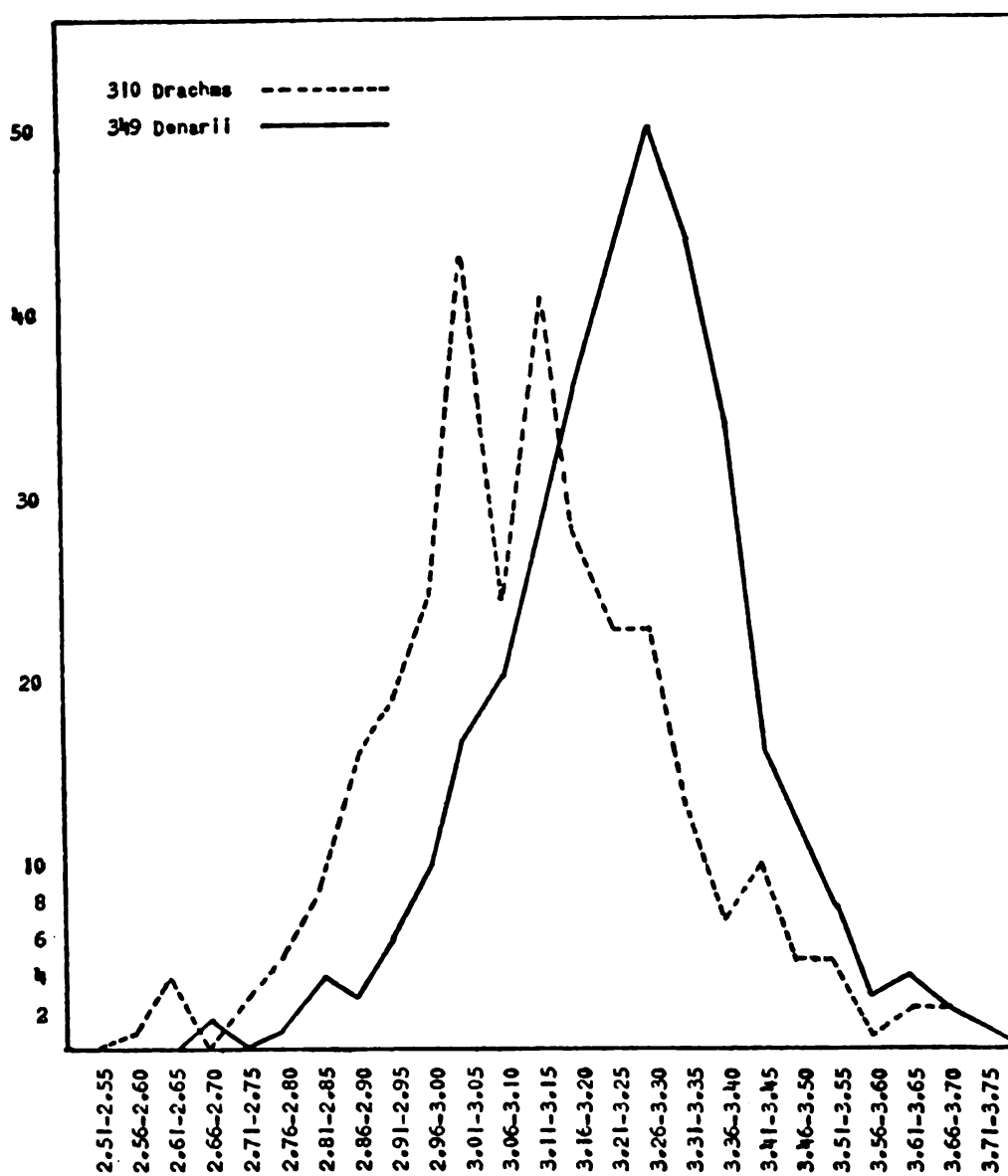
³² This slight deviation from the Roman standard is surprising but not unparalleled. Trajan's Lycian drachms show a mean weight of 3.16 gm. (Callu, *Politique monétaire*, p. 155), different from the Caesarean and Arabian standards; yet coins from all three mints were hoarded together and must have circulated on a par with denarii, from which they were virtually indistinguishable in module, fabric, and style.

The statement of Milik, ("Murabb'ât," p. 15) that the average weight of "deniers provinciaux" of Caesarea is 3.12 gm. is a misinterpretation of the average weight of denarii attributed to Asian mints in *BMCRE* III, p. xv; Mattingly's figures are based on those coins which he assigns to "Mints of Asia" on pp. 374–377. Thus Negev's observation (*JNG*, 1971, pp. 116–7) that the weights of 10 drachms selected randomly from the Mampsis hoard approximate the average weight of drachms of Caesarea—an average quoted from Milik—has no foundation; his theory that drachms of two standards, one "Cappadocian," one "Nabataean," may be dismissed.

³³ The ANS has 4 didrachms and 2 drachms, *rev.* club, with ↑; cf. also *SNGCopenhagen Cyprus* etc., nos. 198, 214, 220.

TABLE II.

Frequency Table: Trajanic Drachms
and Denarii in the Tell Kalak Hoard



The new mint produced more than Arabia and Camel drachms. From the hoard evidence summarized in Table I it is clear that four tridrachm types traditionally assigned to Caesarea must also be reattributed to the Arabian mint; their context is identical to that of the Arabia and camel drachms. Tridrachms with *rev.* types Arabia (Syd. 182), Artemis Pergaea (Syd. 190, 190^a), grain stalks (Syd. 219–220), and aquila and standards (Syd. 224–227) occur in the Tell Kalak and Murabba'at hoards, but not in any hoard from Asia Minor. Three of the four types—Arabia excluded—also appear in the small Nineveh hoard,³⁴ and an Arabia tridrachm was found in the Gush Ḥalav hoard;³⁵ their Middle Eastern provenance is thus confirmed.

Reattribution of these tridrachms to Arabia involves no typological difficulties which did not exist with respect to their traditional assignment to Caesarea, and once again the Arabia type is assigned to a mint where it might be expected to occur. Without question the three other tridrachm types derive from those employed on Trajan's cistophori;³⁶ devoid of local reference, they might have appeared in Arabia as easily as in Caesarea.

In the light of the above reattributions, the history of Trajan's Arabian mint may be summarized as follows. Its earliest issue consisted of the tridrachms with *rev.* Arabia and *rev.* legend ΔΗΜΑΡΧ ΕΞ Υ ΑΤ Ε i.e. TR POT COS V (cat. nos. 1–2 below); on the basis of titulature alone the issue can only be placed in 103–111, but it can hardly have been struck before the annexation of Arabia in 106.³⁷ Probably it belongs in 111 and is contiguous with the tridrachm issues dated to Trajan's sixth consulship (*rev.* types Artemis Pergaea, grain stalks, and aquila and standards, cat. nos. 3–13), from which it is indistinguishable in style.

At some time in 112 the Arabia type began to appear on drachms (cat. nos. 14–15). These continued to be struck at least until 114; the

³⁴ G. F. Hill, "A Hoard of Coins from Nineveh," *NC* 1931, pp. 160–70.

³⁵ See above, n. 5.

³⁶ *BMCRE* III, nos. 146, 707 (grain stalks), 708 (aquila and standards), 709 (Artemis Pergaea).

³⁷ For the date see G. W. Bowersock, "A Report on Arabia Provincia," *JRS* 1971, p. 231 and n. 82.

TABLE III.

Representation of Arabian Drachms in Hoards

	Tell Kalak	Murab- ba'ât	Eleuthe- ropolis	Mampsis	Total
<i>Arabia Type</i>					
<i>Rev.:</i> ΔΗΜΑΡΧ ΕΞ ΙΖ ΥΠΑΤ Τ ζ Jan. 1 to Dec. 9, 112	56	3	11	241	311
ΔΗΜΑΡΧ ΕΞ ΙΖ ΥΠΑΤ Τ ζ Dec. 10, 112 - Dec. 9, 113	67	6	14	281	368
ΔΗΜΑΡΧ ΕΞ ΙΗ ΥΠΑΤ Τ ζ without ΑΡΙCΤΩ Dec. 10, 113 - August, 114	27	6	8	153	194
<i>Camel Type</i>					
<i>Rev.:</i> ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟ ζ with ΑΡΙCΤΩ, without ΠΑΡΘ August, 114 - Feb. 20, 116	68	9	5	204	286

latest known Arabia drachm bears the *rev.* legend ΔΗΜΑΡΧ ΕΞ ΙΗ Υ ΑΤΟ Ϛ, i.e. TR POT XVIII COS VI (cat. no. 17), which extended from December 10, 113 to December 9, 114.³⁸

After Trajan's adoption of the title *optimus* in August, 114,³⁹ only camel drachms (cat. nos. 18–21) were produced by the Arabian mint. All bear the obverse legend ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΠΙCΤΩ (or ΤΡΑΙΑΝΩ ΑΠΙCΤΩ CΕΒ ΓΕΡΜ ΔΑΚ, ἀριστῶ translating *optimo*. Though the epithet *optimus* had appeared in reverse legends before, only after August 114, when it became part of Trajan's official titulature, did it begin to appear in obverse legends. No Arabia drachm nor any tridrachm is found bearing the title; their issue must therefore have been suspended before Trajan's adoption of it.

The issue of camel drachms was short-lived. Though all reflect Trajan's acclamation as *optimus*, none record his adoption of the title *Parthicus*; they cannot then have been issued after February 20, 116.⁴⁰ In fact the representation of the several issues in hoards suggests that the camel issue was even less extensive.

The evidence of the hoards suggests steady and continuous production of drachms from the beginning to the end of the series.⁴¹ The output of 112/113 may be taken as typical, since it represents a full calendar year. That of 112 is somewhat smaller, reflecting perhaps both the slightly shorter period of striking and initial inefficiencies in production. The considerable reduction in output of Arabia drachms during 113/114 reflects the termination of their issue in or before August. If camel drachms replaced them immediately and were produced at a similar rate, their production is likely to have lasted somewhat less than a year.⁴²

³⁸ For Trajan's titulature, see W. Gross, *RE* Supplb. 10 (1965), pp. 1044 ff. All commentators, whatever their view of the *tribunicia dies* early in Trajan's reign, agree that in later years it fell on December 10; all give these limits to Trajan's eighteenth tribunician year. Sydenham (p. 65) simply errs in placing *tr. p.* XVIII in 115.

³⁹ T. Frankfort, "Trajan optimus; Recherche de chronologie," *Latomus* 1957, pp. 333–4 places the adoption of the title between August 10 and September 1.

⁴⁰ *RE* Supplb. 10 (1965), s.v. Traianus, col. 1099.

⁴¹ The similar proportions of the four hoards insure that, taken together, they accurately reflect the relative output of the various issues.

⁴² The size of the Arabia issues is underemphasized here because only those with legible dates could be included in the Table. In the Tell Kalak hoard, however, over 38% of the Arabia drachms had illegible dates; in the Mampsis hoard, 52%.

Coining must have proceeded on a massive scale. Over a century after striking, the coinage of less than four years still represents 13.5% of the denarius-sized coins in the Tell Kalak hoard; the 310 drachms of Trajan almost equal his 349 denarii, struck over a period of nearly 19 years, found in the hoard.

Such massive coining may have been necessitated in part by the stationing of a considerable garrison in Bostra; the Arabian mint may also have been called upon to produce the vast amounts of currency necessitated by Trajan's military activities further east—its closing coincides neatly with the end of his campaigns there. But the choice of types shows that, nominally at least, its purpose was to provide coinage for the newly-annexed province. In an attempt to standardize the coinage in circulation there, earlier silver coins of the Nabataean kings were overstruck;⁴³ but that this effort was not entirely successful is shown by the presence of 119 Nabataean coins in the Hadrianic Murabba'at hoard.

One can only speculate regarding the location of the new mint. The most likely site is undoubtedly Bostra, which Trajan selected as the capital of the province in preference to the more important but more remote Petra.⁴⁴ Two typological factors may support this identification: Bostra was also the province's legionary garrison, hence the aquila and standards type would have been appropriate; and a camel (though of the Arabian variety) appears on the city's later coinage,

⁴³ The employment of overstriking, a rather cumbersome and inefficient mode of converting one form of coin to another, seems to me to rule out the use of the alternative method, recall, melting down and reissue of fresh coin. Yet most of the Arabia and camel drachms show no trace of overstriking, and all the tridrachms were freshly struck. Where did the silver come from? Perhaps in part from the treasury of the Nabataean kings; perhaps some of the reputedly immense booty from Trajan's Dacian Wars was shipped to the province.

⁴⁴ On the selection of Bostra, A. H. M. Jones, *Cities of the Eastern Roman Provinces*, 2nd ed. (Oxford, 1971), pp. 290–2. The increased commercial importance of the city (which styled itself "Nea Traiana Bostra") dates from this period. It became the legionary camp which controlled the Hauran, and eventually a road leading East from the city was built. Under Hadrian the city's first bronze coinage appears; over the next two centuries its growth was sufficient to merit Ammianus' description of it as an *ingens civitas* (14.8.13). Compare Warmington, *Commerce . . . Roman Empire*, pp. 91–3.

perhaps symbolizing its new commercial importance.⁴⁵ In addition, under Hadrian the city issued bronze coinage in the name of the province bearing the bust of Arabia.⁴⁶

To sum up: the Tell Kalak hoard combines with others of Middle Eastern provenance to show that the context of drachms with Arabia and camel reverses is completely different from that of other types associated with Caesarea Cappadociae. Overstriking of some of these drachms on coins of the Nabataean kings indicates that they were instead produced in Arabia, and this conclusion is confirmed by their types. To the same mint belong tridrachms with *rev.* types Arabia aquila and standards, Artemis Pergaea, and grain stalks. The mint operated from at least 111 to 115, with intensive coining of drachms beginning in 112. It may have been located in Bostra, but certainty is impossible.⁴⁷

TRAJAN'S ARABIAN MINT: CATALOGUE

The catalogue which follows describes in detail those varieties of drachms and tridrachms which have been subsumed under the broad headings "Camel," "Grain stalks," etc. in the foregoing discussion and which have been attributed to the mint of Arabia. Reference is made to E. A. Sydenham's *Coinage of Caesarea in Cappadocia* and to W. Wroth's *BMC Galatia*; other sources are cited as appropriate. Notation of finds is intended to be exhaustive: all known finds of each variety are listed.

⁴⁵ For the period under Antoninus Pius, see C. R. Morey, *Catalogue of the Coinage of Bostra* (*Appendix to Div. II. Sect. A. Part IV of Publications of the Princeton University Archaeological Expedition to Syria in 1904-5 and 1909*), p. 6; see also *BMC Arabia*, p. 18 f., nos 13-15 = Morey, no. 15 (Commodus).

⁴⁶ *BMC Arabia*, p. 14, nos. 1-6 = Morey 1.

⁴⁷ Some of the conclusions offered here have been anticipated by A. Negev (*JNG* 1971), and in a privately printed dissertation of 1970, Y. Meshorer used the evidence of overstrikes to attribute drachms with *rev.* camel to Arabia. Meshorer's work, in Hebrew, has been accessible to me only through the abstract in *NL* 86-102. T. V. Buttrey read an earlier draft of this paper and is responsible for its improvement in many respects.

Tridrachms

ΥΠΑΤ Ε

A.D. 106–111 (probably 111)

1. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Head of Trajan bare, r.

Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ Ε

Arabia standing front, head l., wearing chiton, peplos and stephane; holding in r. hand, branch; in l. bundle of cinnamon sticks (?).

To l., Arabian camel.

References: A.E. Cahn, Oct. 14, 1931, no. 954; H. M. F. Schulman, Oct. 6, 1969, no. 668.

Finds: None

2. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. r. with drapery on l. shoulder

Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ Ε

Arabia as no. 1.

References: Syd. 182; *BMC Galatia* 54, 59–61

Finds: Tell Kalak (10), Eleutheropolis (5), Murabba'at (2), Gush Halav (1).

ΥΠΑΤ ζ without ΑΡΙCΤΩ

January 1, 112 – August 114

3. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. r. with drapery on l. shoulder

Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ ζ

Distyle temple on podium of four steps; in pediment, eagle and varying ornamentation; within, cult image of Artemis of Perge.

References: Syd. 190a.

Finds: Tell Kalak (3), Eleutheropolis (3), Nineveh (1).

4. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. dr. r.
Rev.: As no. 3.
References: Syd. 190, *BMCGalatia* 55, 74–75.
Finds: Murabba'ât (1).
5. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Head of Trajan bare, r.
Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ C
Bundle of six grain stalks.
References: none
Finds: Eleutheropolis (1).
6. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. r. with drapery on l. shoulder.
Rev.: As no. 5.
References: Syd. 220.
Finds: Tell Kalak (1), Nineveh (1).
7. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. dr. cuir. r.
Rev.: As no. 5.
References: Syd. 219
Finds: Murabba'ât (1).
8. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Head of Trajan laur. r.
Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤ C
Legionary eagle flanked by standards, that to l. surmounted
by wreath, that to r. by hand.
References: Syd. 224, *BMCGalatia* 57, 88–89.
Finds: Tell Kalak (2), Eleutheropolis (1), Nineveh (1).
9. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. r. with drapery on l. shoulder.
Rev.: As no. 8.
References: Syd. 225. The “aegis” variant requires con-
firmation.
Finds: Tell Kalak (1), Eleutheropolis (1).

10. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. dr. cuir. r.
Rev.: As no. 8.
References: Syd. 226.
Finds: Murabba'ât (1), Eleutheropolis (1).
11. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Head of Trajan laur. r.
Rev.: As no. 8, but standard to l. surmounted by hand, that to r. by wreath.
References: none.
Finds: Tell Kalak (1).
12. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. r. with drapery on l. shoulder.
Rev.: As no. 11.
References: Syd. 227, *BMC Galatia* 57, 90.
Finds: none.
13. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΟC CΕΒ ΓΕΡΜ ΔΑΚ
Bust of Trajan laur. dr. r.
Rev.: As no. 11.
References: *SNG von Aulock* 6398.
Finds: none.

Drachms

ΔΗΜΑΡΧ ΕΞ C ΥΠΑΤ C

January 1 – December 9, 112

14. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝ CΕΒ ΓΕΡΜ ΔΑΚ
Head of Trajan laur. r.
Rev.: ΔΗΜΑΡΧ ΕΞ ΙC ΥΠΑΤ C
Arabia as no. 1.
References: Syd. 183, *BMC Galatia* 54, 62–64.
Finds: Tell Kalak (3), Murabba'ât (3). In the summary of the Mampsis hoard no distinction is made between

this obverse and that of no. 15; the hoard contained 241 specimens of both types.

15. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝ CΕΒ ΓΕΡΜ ΔΑΚ

Bust of Trajan laur. r. with drapery on l. shoulder.

Rev.: As no. 14.

References: Syd. 184.

Finds: Tell Kalak (53). See note at no. 14.

ΔΗΜΑΡΧ ΕΞ ΙΖ ΥΠΑΤ C

December 10, 112 – December 9, 113

16. *Obv.*: As no. 15.

Rev.: ΔΗΜΑΡΧ ΕΞ ΙΖ ΥΠΑΤ C

Arabia as no. 1.

References: Syd. 185.

Finds: Mampsis (281), Tell Kalak (67), Eleutheropolis (14), Murabba'ât (6), Dura-Europus (1) (A. R. Bellinger *The Coins. The Excavations at Dura-Europos. Final Report VI* [New Haven, 1949], no. 2067).

ΔΗΜΑΡΧ ΕΞ ΙΗ ΥΠΑΤ C without ΑΡΙCΤΩ

December 10, 113 – August, 114

17. *Obv.*: As no. 15.

Rev.: ΔΗΜΑΡΧ ΕΞ ΙΗ ΥΠΑΤ C

Arabia as no. 1.

References: Syd. 189.

Finds: Mampsis (153), Tell Kalak (27), Eleutheropolis (8), Murabba'ât (6).

ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟ C with ΑΡΙCΤ, without ΠΑΡΘ

August 114 – February, 116

18. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΡΙCΤΩ CΕΒ ΓΕΡΜ ΔΑΚ

Bust of Trajan laur. dr. cuir. r. seen from behind.

Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟ Σ

Two-humped (Bactrian) camel l. on exergual line.

References: Syd. 205, *BMCGalatia* 54, 65–66.

Finds: Tell Kalak (53), Murabba'at (9), Eleutheropolis (5),
In the summary of the Mamphis hoard no distinction is made between this obverse and that of no. 19; the hoard contained 204 specimens of both types.

19. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΡΙCΤΩ CΕΒ ΓΕΡΜ
ΔΑΚ

Bust of Trajan laur. dr. cuir. r.

Rev.: As no. 18.

References: Syd. 204, not mentioning cuirass. All obverse dies employing the form Ω show Trajan's bust from the front rather than from behind as on nos. 18, 20–21.

Finds: Tell Kalak (9); see note at no. 18.

20. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΡΙCΤΩ CΕΒ ΓΕΡΜ
ΔΑΚ

Bust of Trajan laur. dr. cuir. l. seen from behind.

Rev.: As no. 18.

References: Glendining, Apr. 18, 1955, no. 552b.

Finds: Tell Kalak (4).

21. *Obv.*: ΑΥΤΟΚΡ ΚΑΙC ΝΕΡ ΤΡΑΙΑΝΩ ΑΡΙCΤΩ CΕΒ ΓΕΡΜ
ΔΑΚ

Bust of Trajan laur. dr. cuir. r. seen from behind.

Rev.: ΔΗΜΑΡΧ ΕΞ ΥΠΑΤΟ Σ

Two-humped (Bactrian) camel r. on exergual line.

References: none.

Finds: Tell Kalak (2 from same rev. die).

A HERACLIAN HOARD FROM SYRIA

(PLATES XIV-XVI)

WILLIAM E. METCALF

In April 1974, Robert J. Myers acquired a lot of 147 Byzantine coppers, said to constitute a hoard, in Beirut. In July of the same year the lot was offered for examination to the American Numismatic Society; upon determination that the bulk of the lot did indeed appear to be a hoard, it was purchased by the Museum.

Sixteen coins of the tenth and eleventh centuries were patently extraneous. The coins of the sixth and seventh centuries were all covered with a rather dark green patination; this was lacking on all the later coins and even if their dates had not rendered them obvious intruders they could easily have been separated from the rest. Whether anything has been removed is of course impossible to determine, but the presence of one exceedingly rare and two scarce varieties would suggest that the hoard has not been tampered with.

CATALOGUE OF THE HOARD

The format is similar to that employed by G. E. Bates, *ANSMN* 14 (1968) 83–109, except that reference is made only to the *Catalogue of Byzantine Coins in the Dumbarton Oaks Collection and in the Whittemore Collections*, edited by Alfred R. Bellinger and Philip Grierson. Pieces illustrated in the plates are marked with an asterisk.

ANASTASIUS I (491-518)
(Post-reform coinage, 498-518)

ANASTA SIVSPPAVC *Diademed bust r.*

M Above, cross

CONSTANTINOPLE

$\frac{**}{\text{CON}}$

	<i>mm.</i>	<i>gm.</i>			
1.	35	17.47 ↓	Off. €	DOC 23i.	498-518

$\frac{**}{\text{CON}}$

2.	33	17.27 ↓	Off. €	23j.2	498-518
3.	32	15.47 ↓	Off. €	23j.2	

ANTIOCH

$\frac{*|}{\text{ANTX}}$

4.*	30/35	15.34 ↓	Off. A or Δ	46 var.	498-518
Cross on diadem.					

The cross on diadem insures the attribution to Anastasius although the obverse inscription is obscure. Traces under the mark of value suggest A, or possibly Δ; for the former see C. D. Sherborn, "A List of Byzantine Bronze Coins," *NC* 1934, p. 38.

JUSTIN I (518-27)

DNIVSTI NVSPPAVC *Diademed bust r.*

M Above, cross

CONSTANTINOPLE

$\frac{*|*}{\text{CON}}$

5. 32 14.55 ↓ Off. € 8e 518-27

$\frac{*|†}{\text{CON}}$

6. 28 13.67 ↑ Off. B 9b 518-27

7. 31 19.98 ↓ Off. obscure (A or Δ) 9

8. 28 15.55 ↓ Off. obscure 9

$\frac{*|?}{\text{CON}}$

9. 30 16.96 ↓ Off. Γ 8 or 9 518-27

NICOMEDIA

$\frac{†|†}{\text{NIK M}}$

10. 30 16.44 ↓ Off. obscure 33 518-27

JUSTINIAN I (527-65)

DNIVSTINI ANVSPPAVC *Diademed bust r.*

M Above, cross

CONSTANTINOPLE

$$\frac{* | \dagger}{\text{CON}}$$

11.	28	15.55 ↓	Off. Γ	28c.1	527-38
-----	----	---------	--------	-------	--------

$$\frac{* | \dagger}{\text{CON}}$$

12.	28/31	18.03 ↓	Off. Γ	28c.3	527-38
13.	29	17.39 ↑	Off. €	29a	527-38
14.	31	16.51 ↓	Off. €		
15.	32	15.16 ↑	Off. €		

Armored bust facing; to r., cross

16.*	31	13.61 ↓	Yr. X Off. Γ	—	556/7
			X		

The date is very faint; this seems the most satisfactory reading, though just possibly there are additional figures below. Officina Γ is not recorded for this year in any major catalogue, but is reported by G. E. Bates, *Archaeological Exploration of Sardis*, Monograph 1, *Byzantine Coins* (Cambridge, 1971), no. 127.

NICOMEDIA

$$\begin{array}{c} | \\ \hline \text{NIKO} \end{array}$$

17.	35	18.99 ↓	Yr. X Off. B	127b	547/8

ANTIOCH

$$\begin{array}{c} * | * \\ \hline + \text{THEY} \text{P} + \end{array}$$
Diademed bust r.

18.	31	14.96 ↓	Off. B	210b	527-38
19.	26/34	14.16 ↓	Off. Δ	210d	
20.	29	12.78 ↓	Off. obscure	210	
21.	33	14.08 ↓	Off. Δ	206d	
				or 210d	

Mint mark obscure.

Armored bust facing

$$\begin{array}{c} | \\ \hline \text{THEYPS} \end{array}$$

22.	34	17.06 ↓	Yr. X Off. Γ	229b	559/60
			X		
			III		

JUSTIN I OR JUSTINIAN I

Diademed bust r.

23.	31	18.07 ↓	Off. Γ	518-38
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Mint mark obscure.

To l., *; to r., obscure.

JUSTIN II (565–78)

DNIYSTI NVSPPAVG *Justin and Sophia seated*

M Above, cross
(unless otherwise indicated)

CONSTANTINOPLE

I
CON

24.	26	13.93 ↓	Yr. II Off. Γ II Above, P ; cross between heads	—	568/9
25.	29	12.90 ↓	Yr. 4 Off. B	26b	569/70
26.	30	15.64 ↓	Yr. 4 Off. A Above, ✱	29a	570/1
27.	29	14.19 ↑	Yr. 4 Off. A	32a	571/2
28.	29/32	13.59 ↑	Yr. 4 Off. A II	34a	572/3
29.	29	12.85 ↓	Yr. X Off. B	38b	574/5
30.	29	14.49 ↓	Date obscure. Off. A		

DNIYST NVSPPAV *Justin and Sophia seated*

K Above, cross

THESSALONICA

I
TES

31.	22	5.95 ↓	Yr. E	66	570/1
32.	19/21	5.14 ↓	Date obscure. Above, Θ		

DNIVSTI NVSPPAVC *Justin and Sophia seated*

M Above, cross

NICOMEDIA

I
NIKO

33.	29	13.33 ↓	Yr. 𐣀 Off. A	96a	570/1
34.	32	12.31 ↓	Yr. 𐣀 Off. A	97a	571/2
35.	28	12.10 ↓	Yr. 𐣀 Off. B	97c	
36.	29	12.93 ↓	Yr. 𐣀 Off. B		
			Cross between heads.	—	
37.	39	14.72 ↓	Yr. 𐣀 Off. B	98d	572/3
			II		
38.	32	9.14 ↗	Yr. X Off. A	101a	575/6
			I		

CYZICUS

I
KYZ

39.	28	13.15 ↑	Yr. 𐣀 Off. B	121d	573/4
			III		

ANTIOCH

I
THEYPS

40.	32	12.57 ↓	Yr. 𐣀 Off. Γ	151b	570/1
41.	28	12.33 ↓	Yr. 𐣀 Off. Γ	155a	572/3
			II		

I
THEYPS

42.	29	11.39 ↓	Yr. X Off. Γ	157a	574/5
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K Below, p

43. 26 8.03 ↓ Yr. II 4 167b 571/2

MAURICE TIBERIUS (582-602)

M Above, cross

Armored bust; plume on helmet

CONSTANTINOPLE

I
CON

44. 30 10.94 ↓ Yr. 6 Off. Δ 31d 589/90
II

]NMAVRI TIBERPPAV

45. 29 11.28 ↓ Yr. X Off. B 34b 592/3
I

ONMAVRI TIBERIPPAV

46. 28 10.21 ↑ Yr. II Off. B 36b 594/5
X
I

]MAV[]TIBERPPAVC

47.* 27 10.95 ↓ Yr. II Off. B — 595/6
X
II

]TIBERPPAV

See H. Longuet, "Die unedierten byzantinischen Münzen des Wiener Kabinettes," *NZ* 1957, p. 32, no. 105. Though *DOC* quotes only officinae A and E, we now lack evidence only for officina Γ in this year; for officina Δ see G. E. Bates, "A Byzantine Hoard from Coelesyria," *ANSMN* 14 (1968), p. 94, no. 107 and Longuet, *NZ* 1957, p. 32, no. 106.

48.	30	13.04 ↑	Yr. X II Off. E II	37b	
49.	26/28	11.16 ↑	Yr. X Off. A II	— (cf. 41b)	599/600

δNIII]TIBERP[

Armored bust; trefoil ornament on crown

50.*	33	13.50 ↑	Yr. X Off. B X	— (cf. 43b)	601/2
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δNIIAVRICI TIBERPPAV

This variety, with trefoil ornament, does not seem to be noted elsewhere. *DOC* 43b, however, is pierced at the crucial point, and it does not seem certain that it in fact has a cross, as stated in the catalogue.

Consular bust; small crosses in field l. and r.

51.*	30	13.22 ↓	Yr. X I Off. A	—	602
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]PAVC[Traces of overstriking.

52.*	32	11.62 ↓	X Yr. X Off. obscure. I	45	602
]ERPP[Overstruck on Tiberius II, Constantinople, Off. Γ					

Both coins have † instead of the usual ✠ above **Μ**. The ANS possesses another with † from officina Ε.

Armored bust, plumed helmet

NICOMEDIA			I NIKO		
53.	32	11.29 ↓	Yr. X Off. A	100a	591/2
]ΕΡΡ Overstruck on Justi- nian I, Cyzicus.					

Consular bust, trefoil on crown

			м Above, cross		
ANTIOCH			I THEYPS		
54.	29	11.46 ↓	Yr. III	154	584/5
OΠTATCO[
55.	29	12.61 ↓	Yr. II II	155	585/6
]ATSC[]SPPA]I					

56. 28 12.13 ↓ Yr. II 158b 588/9
 4

ITATPPV —

57. 30 11.94 ↓ Yr. 4 II 159a 589/90
 MTIP[]TPPA

M Above, cross

58. 28 11.84 ↓ Yr. 4 161 590/1
 III

δNMA4ΓI CNP A4T

59. 29 9.34 ↓ Yr. X 172b 601/2
 X

Same inscription

CHERSON **H** To l., Theodosius II holding
 long staff with P at top
 60. 28 10.61 ↓ No mint mark 303

DNM[

PHOCAS (602–10)

Phocas and Leontia standing

m Above, cross

CONSTANTINOPLE

CON

61. 29/32 11.69 ↑ Yr. obscure (1 or 2) Off. Δ 24-5 602-3/4
]FOC[]AVC
 Overstruck on a follis of
 Constantinople.

Consular bust

XXXXX Above, ANNO

62. 26/32 12.85 ↓ Yr. II Off. A 27a 604/5
 I
 ONFOCAS PERP[
63. 29 11.08 ↓ Yr. II Off. E 28e 605/6
 II
]AS PERPAVC
64. 27 10.96 ↑ Yr. 4 Off. A 29a 606/7
 ONFOCAS[
 Overstruck.
65. 30 12.61 ↓ Yr. obscure Off. Γ
]FOCAS[]RPAVC
66. 28 10.40 ↓ Yr. obscure Off. Γ

NICOMEDIA

I
 NIKO

- 67.* 30 11.32 ↓ Yr. 4 Off. A — 607/8
 68.* 29 11.15 ↓ Yr. 4 Off. A — 607/8

Nicomedian folles of Year 6 are recorded in no major catalogue, perhaps because the distinction between 4 and 4 is not easy to make (see

Grierson's note on *DOC* 58a). The two specimens here from officina A are complemented by another in the ANS from officina B. E. Leuthold, "Monete bizantine rinvenute in Siria," *RIN* 1952, pp. 41, 46 n. 8, records two folles of indeterminate officina with date in the form Ψ !; officina A is confirmed by a specimen in the ANS.

CYZICUS

$$\frac{I}{KYZ}$$

69.	30	10.20 \	Yr. II Off. A	72a	605/6
			II		
70.	30	11.41 ↓	Yr. ζ Off. B	73b	607/8
			Inscription obscure. Overstruck on a follis of Constantinople.		
71.	28/33	10.25 ↓	Yr. ζ Off. B	73b	607/8
			Overstruck.		

Phocas and Leontia standing

$$m$$
 Above, cross

ANTIOCH

$$\frac{I}{\text{THE}\Psi\text{P}}$$

72.	24	9.43 ↑	Yr. ζ	89	608/9
			II		
]NFOCA NEP[

Consular bust

73.	24	9.20 ↓	Yr. ζ	90	609/10
			III		
			DNFOCA NEPEAV		

INTERREGNUM (608–10)

*Heraclius and his father in
consular robes, both crowned*

M Above, cross

ALEXANDRETTA

|
A Λ Ε Ξ Α Ν Δ

74.*	27/29	12.32 ↓	Yr.	X	Off.	A	17	610
				IIII				

Its patination leaves no doubt that this coin is an integral part of the hoard, and the presence of so rare an issue in the lot suggests that nothing has been withheld from it. The variety with crowned busts is extremely rare—when he published *DOC* Vol. II, Grierson knew only three examples of it. This coin is from the same obverse die as *DOC* 17.

HERACLIUS (610–41)

Armored bust; cross on crown

M Above, cross

CONSTANTINOPLE

|
CON

75.	27/29	10.14 ↓	Yr.	II	Off.	Δ	70c	611/2
				JhRACLI	Overstruck.			
76.	28	11.91 ↗	Yr.	II	Off.	Ε	70d	
				JPERAV	Overstruck.			

Heraclius and Heraclius Constantine standing

M Above, ✱

- | | | | | | |
|---|-------|---------|---------------------|-----|-------|
| 77. | 32 | 11.97 ↓ | Yr. II Off. B
 | 76b | 612/3 |
| Inscription obscure. Overstruck. | | | | | |
| 78. | 30 | 12.74 ↑ | Yr. II Off. €
 | 76e | |
| Inscription obscure. Overstruck on a follis of Phocas
Yr. 7, mint obscure. | | | | | |
| 79. | 24/29 | 11.20 ↓ | Yr. II Off. A
II | 79a | 613/4 |
| ddNN[Overstruck on a follis of Phocas. | | | | | |
| 80.* | 25/29 | 12.75 ↙ | Yr. II Off. A
II | 79a | |
| ddNNh ERACL[Overstruck. | | | | | |
| 81. | 34 | 12.23 ↙ | Yr. II Off. A
II | 79a | |
| Mark above M obscure.
]ERACONS[Overstruck on a follis of Phocas, Nicomedia
Yr. 7 off. B | | | | | |
| 82. | 27 | 9.96 ↗ | Yr. II Off. Γ
II | 79c | |
| Mark above M obscure. Inscription obscure. Overstruck | | | | | |

on a follis of Phocas, perhaps
also on an earlier issue of
Heraclius.

- | | | | | |
|-----|-------|---------|--|-----|
| 83. | 28 | 12.11 ↗ | Yr. Off. Γ
 | 79c |
| | | |]ERA[Overstruck on a fol-
lis of Phocas. | |
| 84. | 30 | 11.47 ↓ | Yr. Off. Γ
 | 79c |
| | | | Mark above M obscure. In-
scription obscure. Overstruck. | |
| 85. | 25/30 | 9.77 ↘ | Yr. Off. Γ
 | 79c |
| | | |]RACON[Overstruck. | |
| 86. | 24/28 | 8.71 ↗ | Yr. Off. Γ
 | 79c |
| | | |]CLII[Overstruck. | |
| 87. | 28 | 11.11 ↘ | Yr. Off. Δ
 | 79d |
| | | |]ER[A]CONS Overstruck. | |
| 88. | 29 | 11.06 ↑ | Yr. Off. Δ
 | 79d |
| | | | Inscription obscure. Over-
struck. | |
| 89. | 29/32 | 11.85 ↑ | Yr. Off. €
 | 79e |
| | | |]ERACL[
Overstruck on a follis of
Phocas. | |

90.* 30 12.11 ↑ Yr. 4 Off. A — 614/5
(cf. 80a)

Cross above **Μ**. δδNNHERA
ΕΖhERAC[
Double-struck and overstruck.

This and nos. 95 and 103 are the only Heraclian folles which show † instead of the usual ✠ above **Μ**. A similarly low proportion of folles with † can be observed in the Coelesyria hoard; of 23 specimens from Heraclius' years 3–6, only two (Bates *ANSMN* 14 (1968), p. 104, nos. 225, 227) have †. Cf. also the site finds from Sardis, which have the following distribution (Bates, *Sardis* nos. 845–918):

	✠	†
Year 3	14	3
Year 5	3	2
Year 6	2	5

The similarity of evidence from the East and from Western Anatolia thus militates against D. M. Metcalf's argument that Heraclian folles of Years 3 and 5 with † were issued in or consigned to the East ("The Follis of Anastasius," *NC* 1961, pp. 141–2 and "The Aegean Coastlands under Threat. Some Coins and Coin Hoards from the Reign of Heraclius," *AnnBSArchAth* 1962, pp. 16–7).

91. 30 13.63 ↑ Yr. 4 Off. A 80b
δδNNh[Overstruck.

92. 26/29 10.75 ↓ Yr. 4 Off. B 80b
Inscription and mark above
Μ obscure.
Overstruck on a follis of
Phocas, Cyzicus Yr. 6 Off. A

93.	31	9.92 ↑	Yr. 4 Off. B Inscription and mark above M obscure. Overstruck on a follis of Phocas, Con- stantinople.	80b	
94.	28/32	12.52 ↓	Yr. 4 Off. obscure]RACON. Overstruck on a follis of Phocas.	80	
95.	23/26	7.41 ↓	Yr. 4 Off. Δ Cross above M . Inscip- tion obscure; overstruck.	81c	615/6
96.	30	12.82 ↓	Yr. 4 Off. Δ Cross above M]ETHERAC[Overstruck on a follis of Phocas, Nicomedia Yr. 4 Off. A	81d	
97.	29	13.39 ↓	Off. A Date, inscription and mark above M obscure. Over- struck on a follis of Justin II, Constantinople Yr. 4.	Class 2	613-5/6
98.	29	12.42 ↓	Off. A Date and inscription ob- scure. Overstruck on a fol- lis of Phocas, Nicomedia Off. A, perhaps Yr. 1.	Class 2	Class 2
99.	27	12.27 ↑	Off. E Date obscure.]ER ACO[. Overstruck on a follis of Constantinople.		
100.	30	12.09 ↑	Date, Off. and inscription obscure. Overstruck on a follis of Phocas, Constanti- nople Yr. 4. Off. Γ	Class 2	

101.	30	11.36 ↗	Off. A Date and inscription ob- scure. Overstruck.	Class 2
102.	30	11.07 ↑	Off. Γ Date obscure. Overstruck.	Class 2
103.	27	11.01 ↓	Off. B Date and inscription ob- scure. Cross above M . Over- struck.	Class 2
104.	28/30	11.00 ↗	Off. € Date obscure. Ι h Ε RA CON Overstruck on Phocas, Con- stantinople Off. A, date ob- scure.	Class 2
105.	29	10.76 ↓	Off. B Date obscure ddNN h Ε RA[Overstruck on a XXXX follis of Phocas, Constanti- nople.	Class 2
106.*	30	10.00 ↑	Date and officina obscure. Twice overstruck, once on Maurice.	Class 2

A date **ΙΙ** and officina mark **€** are visible on PLATE XVI; but since the right leg of the denomination mark is crossed by the right leg of another **M**, they probably do not accompany the final strike. Still a third **M**, and the cross above it, are visible at 9 o'clock.

Heraclius, Heraclius Constantine and Martina standing

M Above, cross.

107.	26	8.60 ↗	Yr. 41 Off. B	89a	616/7
------	----	--------	---------------	-----	-------

108.* 25 6.69 ↑ Yr. 41 Off. B — 618/9
II

For a follis of officina B with this date in the form G III, see Ratto 1467 (DOC 91).

109.* 24 9.38 ↓ Yr. Cl Off. € —
||

Apparently heretofore unpublished; the ANS possesses another example from different dies.

110.* 24. 7.10 ↓ Yr. X Off. Γ — 619/20

See Bates, *ANSMN* 14 (1968), p. 105, no. 236.

111. 30/33 10.15 ↑ Off. Γ Class 3 615-23
Date obscure. Overstruck.

112.	21/28	7.71 ↓	Off. Γ	Class 3
Date obscure. Overstruck.				

113. 21/24 5.93 ↓ Date and officina obscure. Class 3

M Above, cross and ANNO. On l., R

No crosses between heads

114. 23 7.42↓ Yr. X Off. Γ 99b 624/5
4

115.	23	6.41 ↓	Off. Δ	Class 4 624-9
			Date obscure.	

Armored bust; plume on helmet

M Above, cross

NICOMEDIA

I
NIKO

116.	28/35	12.69 ↓	Yr. I Off. A	153a	610/1
Inscription obscure. Overstruck on Anastasius I, Constantinople <i>DOC</i> 23.					
117.	26/30	11.00 ↓	Yr. I Off. A	153a	
Inscription obscure. Overstruck.					
118.	30	11.51 ↓	Yr. II Off. A	154a	611/2
]NhЄ[Overstruck on Justin I or Justinian I, Constantinople.					
119.	28	10.53 ↓	Yr. II Off. A	154a	611/2
]DNhЄRA[Overstruck.					
120.	32	10.90 ↓	Yr. II Off. B	154b	
]R PERPAVC Overstruck on Maurice.					
121.	31	9.81 ↓	Yr. II Off. B	155b	612/3
I]h[]RPAVC Overstruck.					

Heraclius and Heraclius Constantine standing

122.	31	11.88 ↓	Yr. II Off. B	159b	613/4
II Inscription obscure; overstruck.					

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123. 30 11.09 ↓ Yr. II Off. B 159b
 II
]JNNh[Overstruck.
124. 32 13.46 ↓ Off. B Class 2 613-5/6
 Date and inscription obscure.
125. 31 11.29 ↓ Off. A Class 2
 Date and inscription ob-
 scure. Overstruck on Pho-
 cas Yr. 1.

Armored bust; plume on helmet

M Above, cross

CYZICUS

126. 31 11.08 ↓ Yr. II Off. A 168b 611/2
]PERPAVC Overstruck.

Heraclius, Heraclius Constantine and Martina standing

M Above, cross

CYPRUS

I
 KVPR

127. 25 5.03 ↓ X
 Yr. 41 Off. Γ 185
 II

UNCERTAIN

128. 32 10.18 ✓ **M** Above, cross. Yr.
 II
 II Off. A *Obv.*: Two standing figures.

HERACLIAN HOARD FROM SYRIA

131

129.	32	12.46 ↓	<i>Obv.</i> : Two standing figures. Date, mint and officina obscure.
130.	26	6.90 ?	(Appears to have three standing figures on each face)
131.	20	4.40 ↓	K; beneath, Γ. <i>Obv.</i> : Two or three standing figures, no inscription.

EXTRANEOUS

ANONYMOUS CLASS A-2 (976 ? - ca. 1030/5)

132.	27	11.94 ↓	Bellinger, <i>ANSNNM</i> 35, Var. 24
133.	35	14.14 ↓	Var. 26
134.	32	12.11 ↓	Var. 31
135.	30	9.64 ↓	Var. 39
136.	28/30	14.07 ↓	Var. 41
137.	29	8.58 ↓	Var. 41.
138.	33	12.27 ↓	Uncertain variety.

ANONYMOUS CLASS B (ca. 1030/5-1042?)

139.	30	11.15 ↓	
140.	29/37	10.66 ↓	Overstruck on Class A
141.	30	10.42 ↓	Overstruck on Class A
142.	25	9.32 ↓	
143.	30	6.06 ↓	

ANONYMOUS CLASS C (1042 ? - ca. 1050)

144.	28	10.74 ↘	
145.	32	7.04 ↓	

ANONYMOUS CLASS I (ca. 1075 - ca. 1080)

146.	26	4.60 ↓	
147.	26	4.33 ↓	

TABLE I. Summary of the Hoard

EMPEROR	Con- stanti- nople	Thessa- lonica	Nico- media	Cyzicus	Antioch	Alexan- dretta	Cyprus	Cherson	Obscure	TOTAL
Anastasius I	3			1						4
Justin I	5		1							6
Justin or Justinian								1		1
Justinian I	6		1	5						12
Justin II	7	2	6	1	4					20
Tiberius II										0
Maurice	9		1	6				1		17
Phocas	6		2	3	2					13
Interregnum						1				1
Heraclius	41		10	1			1		4	57
	77	2	21	5	18	1	1	1	5	131

It is no longer possible to question Philip Grierson's attribution of folles with consular busts marked $\Lambda\Lambda\epsilon\chi$ $\Lambda\Lambda\Delta$ from years 13 and 14 to Alexandria ad Issum rather than to Egyptian Alexandria.¹ His original arguments have been reinforced by further finds of these coins in Syria.² This being so, the presence of a follis of Alexandretta in the present hoard (no. 74) supports the Syrian provenance suggested by its acquisition in Beirut.

TABLE II. Representation by Mint

	<i>ANS/Myers</i>	<i>Coelesyria</i>	<i>Tell Bisa</i>
Constantinople	77 (58.0%)	153 (56.5%)	445 (53.4%)
Thessalonica	2 (1.5%)	2 (0.7%)	14 (1.7%)
Nicomedia	21 (16.0%)	45 (16.5%)	140 (17.0%)
Cyzicus	5 (3.8%)	19 (7.0%)	60 (7.2%)
Antioch	18 (13.7%)	49 (18.0%)	165 (19.8%)
Seleucia	0	1 (0.4%)	0
Cyprus	1 (0.8%)	1 (0.4%)	2 (0.2%)
Alexandretta	1 (0.8%)	0	0
Cherson	1 (0.8%)	0	0
Carthage	0	0	1 (0.1%)
Obscure or imitative	5 (3.8%)	3 (1.1%)	7 (0.8%)
	131	273	835

Moreover, the Myers hoard resembles two larger hoards of certain Syrian origin: those of Tell Bisa³ and Coelesyria.⁴ As Table II shows, the representation of mints in the three hoards is remarkably similar.

¹ P. Grierson, "The Consular Coinage of 'Heraclius' and the Revolt against Phocas of 608–610," *NC* (1950), pp. 71–93. For opposing views, see A. Cumbo "La monetazione consolare di Eraclio," *Numismatica* 1962, pp. 3–9, and "Sull' esatta cronologia delle monete consolari di Eraclio," *Numismatica* 1964, pp. 199–203.

² For further pieces found in Syria see *NC* 1955, p. 70, n. 54 and *DOC* 16.

³ E. Leuthold, "Monete bizantine rinvenute in Siria," *RIN* 1952–3, pp. 31–49.

⁴ G. E. Bates, "A Byzantine Hoard from Coelesyria," *ANSMN* 14 (1968), pp. 67–109.

Constantinopolitan coinage is naturally dominant: Nicomedia contributes 16–17 percent of each hoard. Coins of Cyprus constitute a tiny fraction of each. The Myers hoard contains a somewhat smaller percentage of Antiochene issues, a phenomenon which may be accounted for in part by its larger proportion of Heraclian issues.⁵ Differences in

TABLE III. Representation by Emperor

	<i>ANS/Myers</i>	<i>Coelesyria</i>	<i>Tell Bisā</i>
Anastasius I	4 (3.1%)	6 (2.2%)	3 (0.4%)
Justin I	6 (4.6%)	27 (9.9%)	43 (5.1%)
Justin I and Justinian I	0	1 (0.4%)	0
Justinian I	12 (9.1%)	23 (8.4%)	31 (3.7%)
Justin II	20 (15.3%)	12 (4.4%)	60 (7.2%)
Tiberius II	0	12 (4.4%)	33* (4.0%)
Maurice	17 (13.0%)	95 (34.8%)	293* (35.1%)
Phocas	13 (9.9%)	10 (3.7%)	40 (4.7%)
Interregnum	1 (0.8%)	0	0
Heraclius	57 (43.5%)	87 (31.8%)	332 (39.8%)
Obscure	1 (0.8%)	0	0
	131	273	835

* The figures given by Leuthold, "Monete bizantine," are corrected to reflect the subsequent reattribution to Maurice of Antiochene folles formerly assigned to Tiberius II. See J. P. C. Kent, "The Antiochene Coinage of Tiberius Constantine and Maurice 578–602," *NC* 1959, pp. 99–103.

⁵ Though it can no longer be said that the Antioch mint never opened during the reign of Heraclius, the circumstances of its brief production in 622/3, 623/4 are doubtful. G. E. Bates, who has published the folles of these years (*ANSMN* 16 (1970), pp. 80–82) suggests that coins of the earlier year may have been struck by Heraclius in anticipation of victory at Antioch and for payment of his troops; coins of the latter year (when Antioch was in Persian hands) may have been intended to provide a Byzantine type for a Byzantine populace. Philip Grierson would dismiss the earlier coin as an imitation (*A Survey of Numismatic Research 1966–1971*, 2 [New York, 1973], p. 8 commenting on Bates, *ANSMN* 16 and J. Balty, "Un follis d'Antioche daté de 623/624 et les campagnes syriennes d'Heraclius," *SM* 20 No. 77 (Feb. 1970), pp. 4–12. Whatever one's view of these issues, they cannot have had a significant impact on Syrian currency in general.

distribution by emperor may be noted in Table III. In contrast to the Tell Bisa and Coelesyria hoards, the Myers hoard underemphasizes the issues of the last two decades of the sixth century.

In its distribution of Heraclian coins, however, the Myers hoard closely resembles those of Tell Bisa and Coelesyria (Table IV). Pre-year 6 issues constitute over 80 percent of all Heraclian coins in each hoard, with numbers dropping off sharply after that year. This no doubt reflects an overall decline in production of copper coinage owing to the closing of mints at Cyzicus (closed 614/5–627/8) and Nicomedia (closed 617/8–625/6), and probably a slowdown at Constantinople as well. In addition the normal course of circulation to Syria was disrupted by protracted Persian control of the area and the lengthy siege of Constantinople. Coins of Heraclius' early years must have accompanied his invading armies, and after the opening of Syria constituted the most abundant incoming currency.

Other military events accounted for the deposit and loss of the hoard. Its latest coin (no. 127) gives a *terminus post quem* of 628/9, but in view of the sporadic representation of the latest issues burial may have taken place slightly later. The hoard was probably deposited shortly before the Arab invasion and ultimate conquest of Syria.

Taken together with the Tell Bisa and Coelesyria hoards, the Myers hoard helps to illustrate the backwardness of Syrian currency ca. 630. The most noteworthy feature of the three hoards is their comparatively heavy representation of early sixth-century folles, which by this time had vanished from the hoards of Western Anatolia.⁶

⁶ The evidence from Anatolia is limited but consistent. A hoard acquired near Izmir contained 18 folles of Heraclius' years 3–5 (R. N. Bridge and P. D. Whitting, "A Hoard of Early Heraclius Folles," *NCirc* 1966, pp. 131–2. Six hoards from Sardis, all concealed c. 616, bear out the picture. The 1912 hoard published by H. W. Bell, *Sardis. Coins*. (Publications of the American Society for the Excavation of Sardis XI, Leiden, 1916) pp. viii–ix contained 216 coins: 203 of Heraclius and 13 of other rulers, none earlier than Justin II. Five smaller hoards are reported by G. E. Bates, *Sardis* 154: Hoard CC, 1 Phocas. 5 Heraclius; EE. 1 Phocas, 12 Heraclius; FF, 10 Heraclius; GG, 3 Heraclius; HH, 4 Heraclius. With Grierson ("Two Byzantine Coin Hoards," *Dumbarton OP* 1965, p. 216 n. 11) I discount another "hoard" quoted from Bell by D. M. Metcalf, "Aegean Coastlands," pp. 14–23; its contents are probably enough (6 Heraclius) but the circumstances of its discovery leave room for doubt regarding the nature of the deposit, and clearly Bell did not regard it as a hoard.

The continued currency of older folles was a matter of necessity. The closing of the mint at Antioch meant that the coinage of the immediate area could not be "renewed"—i.e. restruck—in the same way as that of Western Anatolia; coins would be restruck only after travelling to Constantinople. In the circumstances this was difficult if not impossible, and the Tell Bisa, Coelesyria and Myers hoards show how thoroughly the currency of Syria was "frozen" after ca. 616.

TABLE IV. Distribution of Heraclian Issues

	<i>ANS/Myers</i>	<i>Coelesyria</i>	<i>Tell Bisa</i>
610/1	2	7	22
611/2	6	12	38
612/3	3	24	106
613/4	14	14	38
614/5	5	5	19
615/6	2	11	10
Obscure of DO Class 2 (610–6)	12	0	25
	44 (81.5%)	73 (83.9%)	258 (81.1%)
616/7	1	1	5
617/8	0	0	1
618/9	2	0	0
619/20	1	2	4
620/1	0	0	5
621/2	0	0	0
622/3	0	0	2
Obscure of DO Class 3 (616–23)	3	0	3
	7 (13.0%)	3 (3.4%)	20 (6.3%)

	<i>ANS/Myers</i>	<i>Coelesyria</i>	<i>Tell Bisā</i>
623/4	0	0	1
624/5	1	1	4
625/6	0	4	4
626/7	0	1	8
627/8	0	3	5
628/9	1	1	4
Obscure of DO Class 4 (623-9)	1	0	4
<hr/>			
	3 (5.6%)	10 (11.5%)	30 (9.4%)
629/30		0	8
630/1		1	2
<hr/>			
		1 (1.2%)	10 (3.1%)
Obscure or imitative	3	0	14
<hr/>			
	57	87	332

SOME HOARDS AND STRAY FINDS FROM THE LATIN EAST

(PLATES XVII-XXI)

D. M. METCALF

I. A NECKLACE MADE FROM A TREASURE OF THE EARLY TWELFTH CENTURY

A necklace of 17 silver or billon deniers to which loops had been attached was acquired recently by the Kadman Numismatic Museum, Tel-Aviv.¹ Although there can be no proof of the coins' provenance, they are a self-consistent group, and appear to reflect a hoard from the late 11th or early 12th century. Twelve of the coins are of Chartres, of a variety found in several other hoards from the Latin East, namely the Istanbul hoard of 1875 (deposited 1096?), the Antioch hoard of 1932 (deposited ca. 1098?),² the First Subak hoard,³ and the Jerusalem hoard of 1968-9.⁴ There are a half dozen similar specimens in the collection at the Convent of the Flagellation.⁵ The coins of Chartres were one of the seven types said by Raymond d'Aguilers to have been in use as "the money of our army" during the First Crusade.⁶ Several of them

¹ My thanks are due to Dr. Arie Kindler for his kind permission to publish this note about the necklace.

² J. Duplessy and D. M. Metcalf, "Le trésor de Samos et la circulation monétaire en Orient Latin aux XIIe et XIIIe siècles," *RBN* 1962, pp. 173-207, at p. 203.

³ D. M. Metcalf, "Coins of Lucca, Valence, and Antioch. Some New Hoards and Stray Finds from the Time of the Crusades," *HBN* 1968-9 (publ. 1972), pp. 443-70, at pp. 444 ff. and 460 f.

⁴ Metcalf, *HBN* 1968-9 (publ. 1972), pp. 466-7.

⁵ Coins acquired in trade in the Old City of Jerusalem, mostly by the late A. Spijkerman, O. F. M., within the last two decades.

⁶ "... solidos monetae nostri exercitus. Erat haec nostra moneta: Pictavini, Cartenses, Manses, Luccenses, Valenziani, Melgorienses, et duo poges pro uno istarum." *Recueil des historiens des Croisades. Historiens occidentaux* 3 (Paris, 1866), p. 278. This refers to coins of Poitou (i.e. Melle), Chartres, Le Mans, Lucca, Valence, Melgueil, and oboles of Le Puy.

became preferred forms of currency in Syria and Palestine during the first half of the 12th century.⁷ Two worn coins of Le Mans and one of Melle from the necklace are also among the types named by Raymond d'Aguilers.⁸ The two remaining pieces, which are the most interesting of the whole group, are of Rheims and Pavia. The former is a very scarce variety attributed to Eudes II (1019–37), while the latter is in the names of Otto I and Otto II (962–7). Both these suggest a relatively early date for the hoard, which may be a sum of money imported in 1098–9, or might even be earlier in date, i.e. prior to the Crusade. The worn condition of most of the coins seems to imply that they were in circulation for a long time. References are made here and in the following note to F. Poey d'Avant, *Monnaies féodales de France*, Paris, 1858–62 (P. d'A.); and to volumes of the *Corpus Nummorum Italico-rum*, (CNI), Vols. 4, 6, 7 and 11 published in Rome in 1913, 1922, 1915 and 1929 respectively.

- *1. CHAMPAGNE: county of Blois and Champagne. *Eudes II*, 1019–37. Mint of Rheims. *Obv.*: Facing head ODOCO Ω ES (retrograde). *Rev.*: Cross ODOCO ω E \sim (retrograde). Compare Poey d'Avant pl. 140, no. 10 = RN 1838, p. 199 with *three* dots above head, as on this specimen; and Poey d'Avant pl. 140, no. 11 = RN 1838, p. 202. Another specimen in RBN 1889, pl. 8, no. 5. See A. Blanchet and A. Dieudonné, *Manuel de numismatique française* 4 (Paris, 1936), pp. 142–3. The history of the mint seems to exclude a later dating of this coin.
- 2–3. MAINE: county of Le Mans. *Obv.*: Monogram of *Erbertus*. COMES CENOMANNIS. *Rev.*: Cross, with dot in 1st and 2nd quarters, A and ω in 3rd and 4th. P. d'A., nos. 1546 ff.
- *4–15. ORLÉANAIS: county of Chartres. *Obv.*: Stylized profile. *Rev.*: Cross CARTIS CIVITAS. P. d'A., no. 1731.

⁷ This is argued in Metcalf, *HBN* 1968–9 (publ. 1972), with particular reference to north Syria. Very few similar finds, i.e. of Lucca and Valence, have hitherto been published from the Latin Kingdom, which might give the impression of a contrast between the early currencies of Jerusalem and Antioch. Such an impression is misleading, for the same types are commonly found in Israel.

⁸ They occur also in the first Subak and Izmir hoards: Metcalf, *HBN* 1968–9 (publ. 1972).

16. POITOU: in the name of *Charles*. Mint of Melle. *Obv.*: Cross CARLVS REX FR. *Rev.*: MET / ALO. P. d'A., no. 2457.
17. ITALY: *Pavia. Otto I and Otto II, 962–7. Obv.*: Monogram of *Otto*. IMPERATOR. *Rev.*: PA / PIA. Around, [OTTO] PIVS RE. *CNI* Vol. 4, pl. 40, no. 9. See also a stray find from Antalya, Turkey, *HBN* 1968–9, publ. 1972, pl. 18, no. 27.

II. A HUNDRED STRAY FINDS FROM AKKO (SAINT-JEAN D'ACRE)

A group of 36 stray finds of 12th- and 13th- century coins from Akko (the Crusaders' Saint-Jean d'Acre) was published by Rahmani and Spaer.⁹ The issues included a good proportion of western European coins as well as issues of the Latin Kingdom, Tripolis, and Cyprus, and are of much interest as an indication of the currency in use in the main port of entry into the Latin Kingdom, particularly in the 13th century. Attention was drawn to the unexpectedly large proportion of coins of the kings of Sicily, and also of lead "tokens," the purpose of which is not really known.¹⁰ Two gold coins of Sicily, also found at Akko, have been published by Meshorer and Spaer.¹¹

Through the vigilance and generosity of Arnold Spaer, a further gathering of a hundred stray finds from Akko is listed here. Most of them are silver or billon deniers or the equivalent. They are, again, essentially from the late 12th and 13th centuries, and the proportions are similar to those in the earlier group of 36 finds. The western European issues are even more varied, including specimens from as far afield as Frankish Greece, Portugal, and England. The currency of the first three quarters of the 12th century is rather sparsely represented: there are 6 coins of Lucca, one of Valence, and 2 of Baldwin of Jerusalem. The coins of Tripolis are difficult to date, but some of them, too, may have been in circulation at Acre before ca. 1175.

⁹ L. Y. Rahmani and A. Spaer, "Stray Finds of Mediaeval Coins from Acre," *INJ* 1965–6, pp. 67–73.

¹⁰ For some similar token-like objects, but in copper, see A. J. Seltman, "Some Crusader Coins," *NCirc.* 1966, pp. 61–3.

¹¹ Y. Meshorer and A. Spaer, "Varia," *INJ* 1965–6, pp. 74–7.

CATALOGUE

The order in which the coins are listed is, first, those of the Latin East (nos. 1–40), following the sequence in G. Schlumberger, *Numismatique de l'Orient Latin* Paris, 1878; then coins of France (41–65), the feudal issues being arranged according to Blanchet and Dieudonné, *Manuel* Vol. 4; then the Empire (66–68), Italy (69–89), Portugal (90–91), England (92), and lead tokens (93–100).

1. ANTIOCH: *Roger*, 1112–9. Æ follis. *Obv.*: St. George and dragon. *Rev.*: POT; € / Π . . . / Schl. pl. 2, no. 12. Roughly-clipped octagonal flan. 3.27 gm.
2. (?): *Bohemund II*, 1126–30. Æ follis. *Obv.*: St. Peter. *Rev.*: Cross B[A IM / λN]ΔOC Schl. pl. 2, no. 15. Very worn.
- *3. *Bohemund III*, 1163–1201. Æ obole. *Obv.*: Fleur-de-lis, four pellets BOANVNDVS. *Rev.*: Cross, four stars. Schl. pl. 3, no. 1 var. (described p. 52). 0.86 gm.
4. JERUSALEM: *Baldwin III*, 1143–63.¹² Billon denier. *Obv.*: Cross +BALDVINVSREX. *Rev.*: Tower of David +DEIERVSALEM. "Neat" style, Schl. pl. 3, no. 21. 0.74 gm. (chipped).
5. Similar, but "rough" style, Schl. pl. 3, no. 22. 0.51 gm. (broken).
6. *Amalric* or his successors (1163–74 or later).¹³ Billon denier. *Obv.*: Cross, with annulets in 2nd and 3rd quarters. AMALRICVS REX, annulet after X, first A double-barred. *Rev.*: Rotunda of the Holy Sepulcher¹⁴ +DEIERVSALEM. Schl. pl. 3, 19. 0.80 gm.
7. Similar, chevron-barred A. 0.84 gm.
8. Another, 0.75 gm.
- *9. Smaller weight and module, after ca. 1187. 0.26 gm.
- *10–12. Three more, 0.28 gm., 0.27 gm., 0.23 gm.

¹² For the attribution, see Duplessy and Metcalf, *RBN* 1962, pp. 178 f.

¹³ Duplessy and Metcalf, *RBN* 1962. The presence of (heavy) coins in the name of Amalric in the Samos hoard, concealed before ca. 1185, establishes their date of origin.

¹⁴ So identified on the rare drachm of Acre, Schl. pl. 20, no. 3: SEPVLC HRI DOMINI. See the seal illustrated in Melchior de Vogüé, *Les églises de la Terre Sainte* (Paris, 1860), p. 184, where the edicule of the tomb is shown within the rotunda.

- *13. Similar, but *rev.* in rougher style. Unofficial copy? 0.32 gm. (creased).
- *14. *Jean de Brienne*, 1210–25. Damietta. *Obv.*: Cross + IOHES REX. *Rev.*: Facing head + DAMIATA. Schl. pl. 3, no. 31. 0.61 gm.
- *15. TRIPOLIS: *Raymond II or III*, 1137–52–87. Æ obole. *Obv.*: Cross with 4 dots in angles + RAIMVNDVS COMES. *Rev.*: Agnus Dei + CIVITAS TRIPOLIS. Schl. pl. 4, no. 8. 0.53 gm.
- *16. Æ obole. *Obv.*: Fortified gateway + CIVITAS. *Rev.*: Cross pommetée with crescents and dots in angles + TRIPOLIS. Schl. pl. 4, nos. 9–11. 1.02 gm.
- 17–20. Similar. 0.93 gm., 0.70 gm., 0.48 gm., 0.41 gm.
- *21. Similar, but simpler type. Schl. pl. 4, no. 12. 0.78 gm.
- *22. *Raymond III*, 1152–87, or *Bohemund IV*, 1187–1233.¹⁵ Billon denier. *Obv.*: Cross + RANVNDVS COMS. *Rev.*: Star of eight rays, with annulets in angles + CIVITAS TRIPOLIS. Schl. pl. 4, no. 16. 0.92 gm.
- *23. *Bohemund IV* or later. Billon denier. Similar, but with group of three dots in second quarter of *obv.*, and + BAMVN Schl. pl. 4, no. 17. 0.41 gm.
- *24. Similar. 0.49 gm.
- 25. Similar, but Æ (counterfeit?). 0.43 gm. (broken).
- *26. Similar, Æ?, dot in 2nd quarter, and star of seven rays. Compare Schl. pl. 4, no. 23. 0.62 gm.
- *27. SIDON: 13th century?¹⁶ Billon denier. *Obv.*: Cross + :D·E·N·I·E·R: *Rev.*: Building with cupola. + :D·E·S·E·E·T·E: Schl. pl. 5, no. 8. 0.46 gm.
- *28. Similar. Plated? 0.62 gm.

¹⁵ For the dating of the series, see the evidence of the Kessab hoard, concealed ca. 1225. H. Longuet, "La trouvaille de Kessab en Orient Latin," *RN* 1935, pp. 163–83, Duplessy and Metcalf, *RBN* 1962, pp. 205–6. All 99 coins in the hoard were, apparently, as Schl. pl. 4, no. 16, with an average weight of 0.81 gm. This suggests a date of issue for the variety not too long before the date of concealment.

¹⁶ For the date of issue, note that there were 6 specimens among a total of 120 in the Djebal hoard of 1902, concealed ca. 1230–35 (Duplessy and Metcalf, *RBN*, 1962, pp. 206–7) and 1 among 38 in the al-Mina hoard, of similar date (D. F. Allen, "Coins of Antioch, etc., from al-Mina," *NC* 1937, pp. 200–10). No specimens have so far turned up in hoards of earlier date.

29. CYPRUS: *Hugh I*, 1205–18. Billon denier. Class II.¹⁷ *Obv.*: Cross. Crescent with dot in 1st and 4th quarters, dot in 2nd and 3rd. +·REXhVGO. *Rev.*: Gateway as Cox, *Tripolis Hoard*, pl. 6, no. 4. (Legend obscure). 0.66 gm.
- *30. Class III. *Obv.*: Crescents in 1st and 4th quarters, stars in 2nd and 3rd +·hVGO·REX. *Rev.*: Fortified gateway with two central battlements (compare Cox, *Tripolis Hoard*, pl. 6, no. 5) +·CYPRI· 0.55 gm.
- *31. Compare Class IV. *Obv.*: dots in 1st and 4th quarters, crescents in 2nd and 3rd +·hVGO·REX. *Rev.*: Fortified gateway +·CYPRI· 0.75 gm.
32. Similar, but crescents in 1st and 4th quarters, dots in 2nd and 3rd. 0.47 gm.
33. Class IV. *Obv.*: Crescent in 1st and 4th quarters, dot in 2nd and 3rd hVGOREX. *Rev.*: Broad gateway (compare Schl. pl. 6, no. 5) with three central battlements, see also Cox, *Tripolis Hoard*, pl. 6, no. 7. 0.61 gm.
- *34. *Henry I*, 1218–53. Billon denier. *Obv.*: Plain cross hENRICVS. *Rev.*: Fortified gateway. REXCYPRI. Compare Schl. pl. 6, no. 12. 0.67 gm.
35. Similar. 0.32 gm. (broken)
- *36. *James II*, 1460–73. Æ sixain, with severely blundered reverse inscription.¹⁸ Schl. p. 203. 1.88 gm.
- *37. Similar. 1.46 gm.
38. FRANKISH GREECE. Achaia: *Geoffrey II*, 1229–46 or *William II*, 1246–78. Æ obole. *Obv.*: Cross G. P. ACCAIE. *Rev.*: Gateway +CORINTI. Schl. pl. 12, no. 10. 0.64 gm.
39. *Isabel*, 1297–1301. Billon denier tournois. *Obv.*: Trefoil at beginning (and end?) of legend Cross +YSABELLA.P.ACh. *Rev.*: Star at (beginning? and) end of legend. Châtel tournois DE CLAREN CIA. 0.84 gm.
40. ATHENS: *Guy II*, 1287–1308. Star under castle. 0.78 gm.

¹⁷ For the classification, see D. H. Cox, *The Tripolis Hoard of French Seignorial and Crusader's Coins*, ANSNNM 59 (New York, 1933), pp. 34–48.

¹⁸ The mainland provenance at such a late date raises the question whether the more blundered varieties may not be imitative.

41. FRANCE. ROYAL COINAGE: *Philip IV*, 1285–1314. \mathfrak{A} Gros tournois. Round O. 4.03 gm.
- *42. FEUDAL COINAGES. Anjou: county of Anjou. 12th–13th centuries,¹⁹ *type immobilisé* in the name of *Fulk*. *Obv.*: Cross with A and ω in 3rd and 4th quarters +FVLCOCOMES. *Rev.*: Monogram of *Fulco*. VRBS ... DCCSV ... P. d'A. no. 1501. 0.99 gm. (worn).
- *43. Similar. 0.76 gm.
- *44. Similar, but rev. ANDEGAVENSIS or similar. P. d'A. no. 1494. 0.95 gm.
- *45. Similar. 0.75 gm.
- *46. Similar, but rev. VRBS ANDEGAVS or similar. P. d'A. no. 1506. 0.91 g.
- *47. Similar. 0.92 gm.
- *48. BERRY: Huriel, lordship. *Humbald*, ca. 1110–20.²⁰ *Obv.*: Cross with annulets in 1st and 4th quarters +HVHBAVDVS. *Rev.*: Four cross-lets +DEVRIACO. P. d'A. no. 2077. 0.49 gm.
- *49. BOURBONNAIS: *Souvigny* (Cluniac priory), first period, 1080–1213. *Obv.*: St. Majolus, crozier l. SCSMAIOLVS. *Rev.*: Cross +SILVINIACO. P. d'A. no. 2169.²¹ 0.80 gm.
- *50. BURGUNDY, duchy: Mint of Dijon. *Eudes II*, 1143–62.²² *Obv.*: Moline with two dots +ODODVXBVRG:DIE. *Rev.*: Cross with arrowheads in 1st and 4th quarters +DIVIONEIISIS. P. d'A. no. 5676.²³ 0.74 gm.
- *51. *Hugh III*, 1162–93.²⁴ Similar, but +VGODVX, etc. 0.90 gm.

¹⁹ There seem to be three main groups among the many varieties of coins in the name of Fulk, namely those with VRBS AIDCCSV (continuing the preceding variety in the name of Geoffrey), those with ANDEGAVENSIS (predominant in the Massay hoard, deposited ca. 1155), and those with VRBS ANDEGAVS, etc. (not found in the Massay hoard, but all three specimens in the Samos hoard are of this variety). (Duplessy and Metcalf, *RBN* 1962, pp. 196–7)

²⁰ J. Duplessy, "Numismatique de Brosse, Sainte-Sévère et Huriel," *RN* 1967, pp. 82–102, republishing P. d'A. no. 2077. The Acre find appears to be from different dies.

²¹ Compare Samos hoard, nos. 26–30.

²² For the dating, see Duplessy and Metcalf, *RBN* 1962, p. 177.

²³ Compare Samos hoard, nos. 9–10.

²⁴ Duplessy and Metcalf, *RBN* 1962, p. 177.

- *52. CHAMPAGNE, county: Mint of Provins. *Henry I*, 1152–80 and *Henry II*, 1180–97.²⁵ *Obv.*: Cross with dots in 1st and 4th quarters, A and ω in 2nd and 3rd + HENRICOMES. *Rev.*: Comb with ∩ V ∩ above. + PRVVINSCASTRI. P. d'A. no. 5972. 1.06 gm.
- *53. Mint of Troyes. Same dates. *Obv.*: Cross, with annulets in 2nd and 3rd quarters + HENRICOMES. *Rev.*: Monogram of *Tebo*. + TRECASCIVITAS. P. d'A. no. 5951. 1.15 gm.
54. Similar. 0.87 gm.
- *55. DAUPHINÉ: Mint of Vienne. *Obv.*: Head of St. Maurice l. + S.M. VIENNA. *Rev.*: Cross, four dots in angles MAXIMAGALL. P. d'A. no. 4826. 0.82 gm.
- *56. Valence, bishopric. *Obv.*: Angel + VRBSVALENTIAL. *Rev.*: Cross, annulet in 4th quarter + SAPOLLINARS. P. d'A. no. 4690. Metcalf Group E.²⁶ 0.96 gm.
- *57. FLANDERS, county: Mint of Lille, ca. 1180–1220. *Obv.*: Triangle, with annulets at points, fleur-de-lis at each side. *Rev.*: Cross, four dots, dotted circle. L I L A. J. Ghyssens, *Les petits deniers de Flandre*, (Brussels, 1971), no. 266 or similar. 0.24 gm.
- *58. LANGUEDOC: Melgueil, county. *Obv.*: Pale with two pennons RAMV-NOS. *Rev.*: Four annulets NAIBONA. P. d'A. no. 3843. 0.95 gm.
59. Le Puy, bishopric. *Obv.*: Cross. *Rev.*: Chrism. P. d'A. no. 2231. 0.78 gm.
- *60. LYONNAIS: Lyon. *Rudolph III*, 993–1032 or later. *Obv.*: Cross + RODVLFS. *Rev.*: "Temple" type LVGVDVNV. P. d'A. no. 5023. 0.65 gm.
- *61. MAINE, county: Le Mans. *Obv.*: Monogram of *Erbertus*. + COHE S-CEHOM^HIS. *Rev.*: Cross with dots in 1st and 2nd quarters, Λ and ∪ in 3rd and 4th + SIGNVMDEIVIVI. P. d'A. no. 1561. 1.11 gm.
- *62. NORMANDY, duchy: *Obv.*: Cross with four dots, border, traces of legend. *Rev.*: Jumbled design of gables, annulets, and lines. Compare P. d'A. pl. 6, 10, 11. 0.71 gm.
- *63. ORLÉANAIS: Gien-Donzy. *Geoffrey III*, 1120–60, and successors to 1197. *Obv.*: Cross, with A and ω in 3rd and 2nd quarters. + GOSED-VSCOS. *Rev.*: Monogram imitating that of Fulk of Anjou

²⁵ For the dating (ca. 1160–90) see Duplessy and Metcalf, *RBN* 1962, p. 176.

²⁶ Metcalf, *HBN* 1968–9 (publ. 1972), pp. 452–4.

- +GIEMISCA. P.d'A. no. 1998. Duplessy and Metcalf, *Trésor de Samos*, nos. 1–7. 0.90 gm.
- *64. PICARDY: Amiens, late 12th or early 13th century. *Obv.*: Two fleurs-de-lis, star, and crescent around central pellet. Four annulets in outer border. *Rev.*: Cross with crescents and annulets in angles SIMON. Compare P.d'A. pl. 149, no. 20. 0.33 gm.
- *65. UNCERTAIN: Imitation of denier of Mantes of *Louis VI* (1108–37). *Obv.*: Two crosses and two annulets +EVORVONIS or similar. *Rev.*: Cross. +ISOVIIIOVII or similar. E. Caron, *Monnaies féodales françaises* (Paris, 1882), no. 686 and pl. 27, no. 13 is a piedfort of this otherwise unrecorded variety.²⁷ Middle or second half of 12th century? 0.82 gm. (pierced).
- *66. EMPIRE: HAINAUT: *Obv.*: Monogram of Hainaut, two crescents. *Rev.*: Cross with two crescents and two pellets in angles. R. Chalon, *Recherches sur les monnaies des comtes de Hainaut* (Liège, 1972), p. 25 and pl. 1 no. 4. 0.48 gm.
- *67. BRABANT: *Henry II*, 1235–48 or *III*, 1248–61. Denier. *Obv.*: Shield with lion H.DVCIS 3 dots above. *Rev.*: Cross of Brabant B V S T. A. de Witte, *Histoire monétaire des Comtes de Louvain* (Antwerp, 1848–9), p. 53, pl. 3, no. 68. 0.48 gm.
- *68. AACHEN: *Frederick I*, 1152–90. Denier. *Obv.*: Throned figure of emperor with shouldered sword, and orb. Star in field FREDERI-[CIM]PR. *Rev.*: Tower with gateway and flanking buildings +ROMA [CAPVTMVNDI]. J. Menadier, "Die Aachener Münzen," *ZNum* 1913, pp. 321–422, no. 27a; H. Buchenau, "Münzfund von Stromberg im Hunsrück," *Blätter für Münzfreunde* 1914, cols. 5495–5500, pl. 210, no. 19b. 1.33 gm.
- 69–72. ITALY: LUCCA: *Obv.*: Monogram of *Otto* +IHPERATOR. *Rev.*: L V C A in field +ENRICVS CNI Vol. XI, pl. 4, no. 28. Metcalf, *HBN* 1968–9, publ. 1972, pl. 18, nos. 1–2.²⁸ 1.07 gm., 1.02 gm., 0.83 gm., 0.74 gm.
- *73. Slightly less neat. 1.15 gm.

²⁷ I am indebted to Jean Duplessy, who was able to point out the correct identification of this coin. The attribution remains uncertain.

²⁸ Metcalf, *HBN* 1968–9 (publ. 1972), pp. 448–52.

74. Copy in rough style. Metcalf, *HBN* 1968-9 (publ. 1972), pl. 18, nos. 15-18. 0.80 gm.
75. VERONA: *Frederick II*, 1218-50. *Obv.*: Cross CI / ID / IV / ID. *Rev.*: VE / RO / N / A CNI Vol. 6, pl. 24, no. 6. 0.31 gm.
76. VENICE: *L. Tiepolo*, 1268-75. Billon quartarolo. *Obv.*: V E N C in field; +LA·TEUPL·DVX. *Rev.*: Cross with 4 fleurs-de-lis + ∞ MARCV ∞ CNI Vol. 7, pl. 2, no. 17. 0.70 gm.
77. *J. Contarini*, 1275-80. Similar, but +IA9TARE·DVX. CNI Vol. 7, pl. 2, no. 21. 0.43 gm.
78. *G. Dandolo*, 1280-89. Similar, but +IO·DANDVLO. CVI Vol. 7, pl. 2, no. 25. 0.72 gm.
- *79. SICILY: *William I*, 1154-66. Æ follaro. *Obv.*: Mother of God MPOV. *Rev.*: REX/W. Around, in Arabic: "Struck in Messina in the year []." G. Sambon, *Repertorio generale* (Paris, 1912), no. 944. 1.41 gm.
- *80. *William II*, 1166-89. Æ follaro fraction. *Obv.*: Lion head. *Rev.*: Arabic inscription: "King William the second." Sambon, *Repertorio*, no. 1001. 2.17 gm.
- *81. *Obv.* REX.W/SCQS. OPERATA IN VRBE MESSANA. *Rev.*: Arabic inscription: "King William the second. Struck by the order of the magnificent king, to the glory of God." Sambon, *Repertorio*, no. 1002. 0.73 gm.
- *82. *Frederick II*, 1220-50. Billon denaro. *Obv.*: Ω I Ω P.
FROMANR'SEMPAVG. *Rev.*: Cross, trefoil in 2nd quarter R.IERSL'ETSICIL. Sambon, *Repertorio*, no. 1158. 0.71 gm.
- 83-4. Similar. 0.43 gm.; 0.41 gm. (corroded and broken).
85. *Obv.*: Ω F R in field. Obscure. As Sambon *Repertorio*, no. 1160? 0.78 gm.
- *86. *Conrad IV*, 1250-4. Billon denaro. *Obv.*: C · O / R in field +IERVSALEM. *Rev.*: Cross +ET·SICIL'REX. Sambon, *Repertorio* no. 1167. 0.60 gm.
- *87. *Obv.*: Cross +CONRADVS. *Rev.*: RE / X in field +IERLETSICIL. Sambon, *Repertorio*, no. 1169. 0.61 gm.
88. Similar. 0.61 gm.

- *89. *Obv.*: Cross +CONRADVS. *Rev.*: \mathfrak{B} in field; +IERLETSICIL.
Sambon, *Repertorio*, no. 1171. 0.71 gm.
- *90. PORTUGAL: *Sancho I*, 1185–1211. Mealha? *Obv.*: REX SANCIVS.
Rev.: PO/RT/VG/AL. J. Ferraro Vaz, *Numaria medieval portuguesa* (Lisbon 1960), pl. 3, no. 12. 0.43 gm.
91. *Sancho II*, 1223–48. Dinheiro. Ferraro Vaz, *Numaria*, pl. 8, no. 21. 0.54 gm.
92. ENGLAND: Short-cross penny, 1180–1247. 0.81 gm. (broken).
- 93–100. LEAD TOKENS. See Fig. 1 for rough sketches of these.

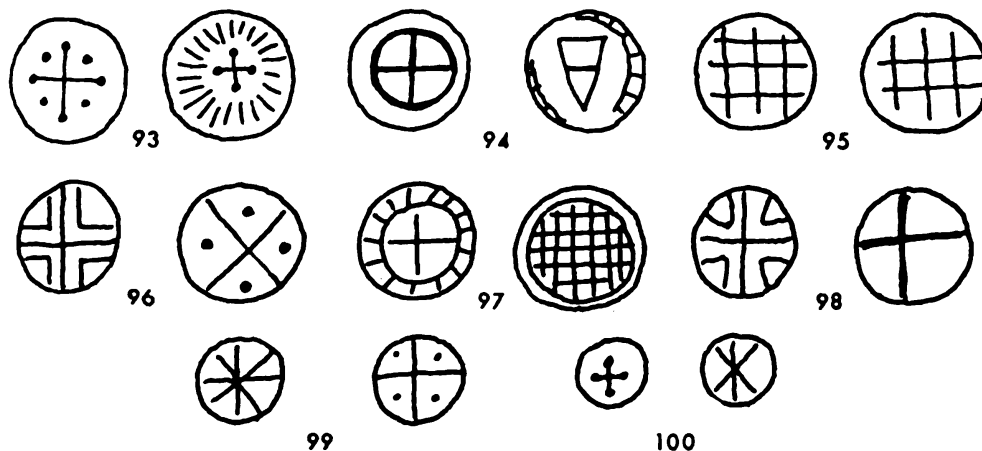


Fig. 1

III. A THIRTEENTH-CENTURY HOARD OF COINS OF PROVINS AND ANGOULÊME

A hoard which came to notice in Jerusalem recently²⁹ contained 53 coins of the counts of Champagne, minted at Provins, and 34 of the counts of Angoulême. The latter are of a *type immobilisé*, and cannot be dated at all accurately.³⁰ The coins of Provins are potentially more

²⁹ The chance to record this find is owed to the generosity of Arnold Spaer, who borrowed the coins and placed them in my hands for study and publication.

³⁰ The type was replaced in or after 1181 (Dieudonné, *Manuel*, Vol. 4, pp. 70 f.), but there was still one specimen in the Montluçon hoard (Duplessy and Metcalf, *RBN* 1962, pp. 199–200), concealed ca. 1213. All the 223 coins of Angoulême in the Guitinières hoard, concealed ca. 1230, are of a later variety: A. Bronfenbrener, "Le trésor de Guitinières," *RN* 1969, pp. 271–88.

susceptible to exact dating. They are a compact group characterized by the deformation of the *Odo*-monogram above the comb into OYO — rather than the $\wedge V \wedge$ found, for example, on the coins of Provins in the Samos hoard, concealed ca. 1182. The *omega* on the obverse is carefully written as ω rather than \cup — again, in contrast to the Samos hoard issues. The stylistic range within the hoard probably reflects the variety of dies cut at Provins within quite a short period, and it is not obvious how the coins can be put any more closely into sequence. The most conspicuous variation is in the comb (Fr. *peigne*: probably a rebus alluding to Champagne),³¹ of which the teeth are sometimes coarse, sometimes fine.

The older pieces are in the name of Henry (Henry I and II, 1152–80–97), while the newer ones are in the name of Thibaut (Thibaut III and IV, 1197–1201–53).³² This provides a *terminus* of 1197, but as the proportion of coins in the hoard in the name of Henry is low, and the specimens are worn, a date after 1200 is indicated. On the other hand, unless the coins of Angoulême were brought to the Latin East some years before the concealment of the hoard, it is hard to see how it can fall very far into the 13th century.

The coins may be described as follows:

- *1. CHAMPAGNE: county. *Henry I*, 1152–80. Provins? (with the name of Sens).³³ *Obv.*: Cross, with dot in 1st and 2nd quarter, A and ω in 4th and 3rd SEEN.IIISCIVIT. *Rev.*: Comb with OXO (*Odo*) above. [. . . .] MISCATO. Compare P.d'A. pl. 138, no. 16. 0.95 gm.
- *2–7. Provins. *Henry I*, after 1160, or *Henry II*, 1180–97. *Obv.*: Cross, with dot in 1st and 4th quarters, A in 3rd, ω in 2nd HENRI COMES. *Rev.*: Comb with OYO above. CASTRIPRVVINS. Com-

³¹ In its origins, the type seems to be a degeneration of the monogram *Odo Rex* (Dieudonné, *Manuel*, Vol. 4, figs. 74, 75). It has also been seen as a reference to the woolen industry.

³² For the dating, see Duplessy and Metcalf, *RBN* 1962.

³³ Dieudonné, *Manuel*, Vol. 4, p. 137: "Je ne serais pas non plus étonné que les Deniers qui ont le nom de Sens et le type au peigne, de Provins, sans specification de cet atelier, soient sortis de Provins . . . les ateliers moins renommés . . . inscrivent le nom de la métropole pour donner crédit à leur numéraire."

pare P.d'A. pl. 138, 19. *1.23 gm. (with a coarse comb), 1.13 gm. (2), 1.04 gm., 1.03 gm. 1.00 gm.


8-53. *Thibaut III*, 1197-1201 or *Thibaut IV*, 1201-53. Of 46 coins in the name of Thibaut, only one (no. 8, with an unusually narrow comb, and a smaller cross) is divergent in style from the rest. The 45 comprise 20 with reversed S in COMES, and 25 with a normal S. There is no sign of stylistic progression between the two groups, and metrologically there is nothing to choose between them. Indeed, a reverse die link would come as no surprise.

*8. *Obv.*: As nos. 2-7, but *TEBALTCOME2* *Rev.*: Narrow comb. 1.07 gm.

*9-28. As no. 8, but normal style. The comb varies from coarse (*9, 1.07 gm.) through medium (*10, 1.15 gm.; *11, 1.11 gm.) to fine (*12, 1.11 gm.); 16 other specimens in the same range, 1.14 gm., 1.12 gm., 1.11 gm., 1.09 gm. (2), 1.07 gm. (2), 1.06 gm., 1.05 gm., 1.04 gm., 1.03 gm. (2), 1.01 gm., 1.00 gm., 0.97 gm., 0.93 gm.

*29-53. Similar, but normal S in COMES. The comb again varies from coarse (*29, 1.06 gm., with die flaw; *30, 1.01 gm.) through medium (*31, 1.07 gm.) to fine *32, 1.04 gm., smaller dies; *33, 1.13 gr., teeth of comb turned to right); 20 others, in the middle of this stylistic range, 1.13 gm., 1.12 gm. (2), 1.11 gm., 1.10 gm., 1.09 gm., 1.08 gm. (2), 1.06 gm., 1.05 gm., 1.04 gm. (4), 1.03 gm., 1.02 gm., 1.01 gm., 1.00 gm., 0.96 gm., 0.93 gm.

54-87. ANGOULÊME: county. *Type immobilisé* in the name of *Louis*, third series.³⁴ *Obv.*: Cross + LODOICVS. *Rev.*: Crosslet between 4 annulets + EGOLISSIME. Among 25 deniers in the hoard, there is very little stylistic variation: but four of the oldest coins (worn, chipped) have larger annulets, bolder dotted borders, and slightly less stylized lettering. No corresponding distinction can be seen among the nine oboles, which may all belong with the later group of deniers, but their appearance suggested a division into "smooth"

³⁴ Dieudonné, *Manuel*, Vol. 4, pp. 70 f., distinguishes issues with: a) central crosslet—1.60 to 1.10 gm.; b)  in center—1.15 to 0.98 gm.; c) central crosslet again, but smaller flans—0.95 to 0.80 gm.; d) five annulets; etc.

and "rough" styles—the "smooth" coins might be a little earlier.³⁵

*54–57. Older deniers. 0.85 gm., 0.73 gm., 0.69 gm. (chipped), 0.59 gm.

*58–78. More recent deniers. 1.07 gm., 0.99 gm., 0.98 gm., 0.94 gm., 0.86 gm., 0.83 gm., (2), 0.82 gm. (2), 0.80 gm. (2), 0.78 gm., 0.76 gm., 0.75 gm., 0.74 gm., 0.73 gm. (2), 0.72 gm. (2), 0.70 gm., 0.68 gm.

*79–87 Obols. "Smooth" style (*79–80. 0.48 gm., 0.435 gm.) and "rough" style (*81–82. 0.50 gm., 0.335 gm.). Indeterminate: 0.49 gm., 0.45 gm., 0.39 gm., 0.38 gm., 0.34 gm.

³⁵ Unfortunately the weights of the coins of Angoulême were recorded in such a way that they cannot now always be associated with particular coins within a group. The illustrations on PLATE XXI have accordingly been numbered 54–7, 58–78, and so on.

A NOTE ON TWO COIN HOARDS REPORTED IN *KAO KU*

(PLATES XXII-XXV)

ROSE CHAN HOUSTON

Among the more important coin hoards unearthed during the past two decades in the People's Republic of China are those of Sasanian silver drachms from the provinces of Shensi, Hopeh and Sinkiang. This article deals with the two most recently reported discoveries, one in Ch'angan and the other in Yaohsien, Shensi.¹

In December 1965, seven Sasanian silver drachms were discovered in a round silver box 5 cm. high and 5.5 cm. in diameter² inside a white porcelain *po*³ found in a dilapidated brick pagoda located in the vicinity of Kuo Ch'ing monastery in T'ien Tzū Yü, Ch'angan county. T'ien Tzū Yü is approximately 40 miles from present-day Sian.⁴ In 1920, a number of pottery Buddhist statues of the T'ang period were unearthed there, corroborating the literary record of the existence there of the famous Chih Shang Buddhist monastery of the Sui (589–618) and T'ang (608–906) dynasties. The five-story pagoda is ca. 5 m. high and has a square base 1.5 m. long. The *po* was found in a brick enclosure on the third floor of the pagoda. Judging from the brick pattern and the

¹ Information on these two hoards is obtained from an article by Chu Chieh-yüan and Ch'in Po entitled "Shensi Ch'angan Ho Yaohsien Fa Hsien Ti Po-szū Sa-San Chao Yin Pi" [Persian Sasanian silver coins discovered at Ch'angan and Yaohsien in Shensi province]. *Kao Ku*, no. 2 (Peking, 1974), pp. 126–32.

² Throughout this article, the word diameter is used to indicate the diameter of the opening, not of the body, of any round object, for in most cases, the body of the object is much wider than its opening or mouth.

³ A *po* is a Buddhist monk's alms bowl. This white porcelain *po* measured 13 cm. high; its mouth was 14.5 cm. in diameter.

⁴ Sian, the modern capital of Shensi, was known as Ch'angan in ancient times; during the Sui and T'ang dynasties, it served as the capital, and was consequently the focal point of Chinese civilization as well as the crossroads of East-West cultures.

shape and texture of the *po*, the pagoda was part of the Chih Shang Buddhist monastery of Sui and T'ang times.⁵

In April 1969, three Sasanian silver drachms were unearthed in the vicinity of a Buddhist monastery in Yaohsien. The coins were found in a square bronze box ca. 15 cm. high together with 27 *wu chu* coins of the Sui dynasty, three Buddhist relics and 11 bracelets (one gold, one jade and nine silver). The box was discovered in the lower tier of a double-tiered stone container in the center of the base of a *shê-li*⁶ pagoda that was discovered buried ca. 2 m. below ground. The stone container measured 103 cm. square and 119 cm. high; the lid, 52 cm. thick, was inscribed with nine seal-script characters reading: "Great Sui Emperor's *shê-li* pagoda inscription tablet." The sides of the lid were carved with "flying" flowers and weeds while the side of the container had Buddhist deities engraved on them. The inscription tablet in the upper tier of the container measured 10 cm. high and 51.5 cm. square. There were 12 rows of characters on it, each row containing 12 characters. The date of the inscription was "Jên Shou fourth year, fourth moon, eighth day."⁷

Of the seven Sasanian silver drachms found in the pagoda in T'ien Tzū Yü, six belonged to the same ruler,⁸ Xusraw II (591–628).⁹ Although the reproductions of the rubbings of the Chu and Ch'in coins are not very clear, the mints and the dates are all legible. The six coins were issued within a 14 year period, between years 25 and 39 of Xusraw II's reign, and were from six different mints.¹⁰ The attributions of

⁵ Chu and Ch'in, pp. 126–7.

⁶ *Shê-li* means "Buddhist relic."

⁷ "Jên Shou" was the second reign-name of the Emperor Kao Tzū (589–601) of the Sui dynasty, and the fourth year of Jên Shou was A.D. 604.

⁸ PLATES XXII–XXIV, These six coins are numbered 1–4, 6–7. ANS specimens are lettered A–F. Note that specimens 3 and C are of different dates; the ANS collection does not have drachms from the NYH mint for year 39 of Xusraw II's reign.

⁹ Xusraw II was on the throne for 39 years and reportedly had over 120 mints in production during his reign (Chu and Ch'in, p. 129). Though Robert Göbl (*Sasanian Numismatics* [Braunschweig, 1971], p. 33) gave no statistics, he wrote: "... the number of mints continued to increase in the course of Sasanian rule and attained an absolute maximum under Xusrō II who was known to have been enthusiastically devoted to minting."

¹⁰ See Table I, p. 159. All information on coins 1–4, 6–7 is from Chu and Ch'in, pp. 130–2, including spelling of mint names.

Chu and Ch'in are acceptable except for the dates of coins 2 and 6, and the mints of coins 1 and 6. The date of coin 2 is, according to Chu and Ch'in, 𐭪𐭫𐭬𐭭𐭮 (panj-sih) or year 35 of Xusraw II's reign, but careful examination of the rubbing suggests that the date is 39, 𐭪𐭫𐭬𐭭𐭮𐭬 (nūj-sih).¹¹ As for coin 6, the date given is 27, 𐭪𐭫𐭬𐭭𐭮𐭬𐭭 but it seems to be 𐭪𐭫𐭬𐭭𐭮𐭬𐭭𐭮 (haft-dah), year 17.¹²

Chu and Ch'in tentatively identified the mint monogram of coin 1 as AYR (Eran, i.e., Susa), but it is difficult to accept such an interpretation because the monogram appears to be 𐭪𐭫 (NB), not 𐭪𐭫𐭬 (AYR).¹³ NB unfortunately is a mint signature of uncertain attribution.¹⁴ Coin 6 was attributed to the Darabjird mint by Chu and Ch'in, but the mint monogram is not 𐭪𐭫𐭬𐭭 (Darabjird) but 𐭪𐭫𐭬 (RD).¹⁵ Unfortunately, RD is also a mint signature of uncertain attribution.¹⁶

The remaining coin from the T'ien Tzū Yü hoard is an issue of the Sasanian queen Bōrān who ruled for only one year, 630/1. According to Chu and Ch'in, it was issued by the Sakastan mint and dated Ayuki (sic) or the first year of her reign.¹⁷ There is no doubt that the mint abbreviation is SK but the date is less certain. Upon closer examination, the date appears to be 𐭪𐭫𐭬𐭭 (taltā) and not (𐭪𐭫𐭬𐭭𐭮𐭬𐭭 (ayōkī), and therefore should be the third year of Bōrān's reign.¹⁸ For the purpose of

¹¹ See Furdoonjee D. J. Paruck, *Sāsānian Coins* (Bombay, 1924), pp. 490–1 and pl. 32. Coins of year 39 of Xusraw II are relatively scarce.

¹² See Paruck, pp. 488–9 and pls. 31–32.

¹³ Paruck, p. 254 and pl. 33, 11, and pl. 34, 126.

¹⁴ Mordtmann suggested Nisā in Khorāsān or Nishāpūr in Khūzistan (Paruck, p. 164). See also Göbl, table 16.

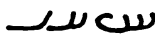

¹⁵ Göbl, table 16. See also Paruck, pp. 243, 248 and pls. 33, 69 and 34, 163.

¹⁶ For more detailed discussions on the subject, see Paruck, pp. 172–3 and Göbl, tab. 16.

¹⁷ Chu and Ch'in remarked (p. 130) that the mint monogram of this coin would be taken as SD if one were to follow Jacques de Morgan's interpretation (*Manuel de numismatique orientale de l'antiquité et du moyen âge* [Paris, 1923], pp. 289–300) but that they preferred John Walker's theory (*A Catalogue of the Arab-Sassanian Coins* [London, 1941]) which argues that SD and SK represent the same mint, namely, Sakastān.


¹⁸ See Paruck, p. 117 and pl. 31.

comparison, a Bōrān coin of the first year of her rule from the ANS collection is illustrated on PLATE XXIII.¹⁹ Due to the brevity of her reign and the general political instability of the period, the volume of Bōrān's coinage was quite small, and coins with the date taltā are extremely scarce.²⁰

Of the three coins unearthed in Yaohsien, one is a silver drachm of Xusraw I (531–579) whose coinage was quite plentiful.²¹ According to Chu and Ch'in, this coin is dated to year 13 of Xusraw I's reign and the mint is ST or Istakhr. It appears, however, that the date spells  (sij-sī) year 33 and not  (sij-dah), year 13.²² The ANS specimen is of the same mint but the date is year 25 of Xusraw I's reign.²³

The two other silver drachms belong to Firōz (457/59–484) and Kobād I (488–489, 499–531). These two coins have similar reverses except for the difference in the shape of the star in left field: that of the Kobād drachm is six-pointed whereas that of the Firōz coin is five-pointed. According to Chu and Ch'in, the date of coin 9 is year 11 of Kobād I's reign (510) and the mint monogram is AS which cannot be identified.²⁴ The ANS specimen has the same mint monogram and, according to Göbl, is Ispahān.²⁵ The date of the coin is somewhat problematic: the Christian equivalent of regnal year 11 should be 499, not 510, as Chu and Ch'in have it. Moreover, it is doubtful that the regnal year is 11 because of the general pattern of the coin's obverse. First, the symbol, star in crescent, at three, six and nine o'clock positions on the obverse margin did not appear until year 13 of Kobād I's reign.²⁶ Second, the lone star in the upper left field of the obverse appeared

¹⁹ The ANS specimen is from the Hamadān mint.

²⁰ The ANS has only two Bōrān coins in its collection, both dated, ayōkī (630/1). The one illustrated on PLATE XXIII is of Hamadān and the other, unidentified, appears to be of  (NYHC).

²¹ Xusraw I reportedly had 80–90 mints in operation during his reign. His coins had been found in Sinkiang and Honan provinces prior to this Yaohsien discovery (Chu and Ch'in, p. 130).

²² PLATE XXIV, 8. See Paruck, pp. 474–6 and pl. 32, and Göbl, tab. 16.

²³ PLATE XXIV, H. See Table II.

²⁴ Chu and Ch'in, p. 132. See also Table II.

²⁵ PLATE XXIV, I. See Göbl, p. 82.

²⁶ Göbl, p. 51; Paruck, p. 103.

only on coins issued between the years 12 and 19 of his reign. Third, the crescent directly above each of Kobād's shoulders appeared only from year 12 onward. Finally, the secondary ribbons of the crown were turned symmetrically upward on Kobād's coins from year 13 of his reign onward.²⁷ Moreover, شجده (shaj-dah) and یاجده (yāj-dah) are so similar one can easily be mistaken for the other.²⁸ In this case, however, the reading of the regnal year as 13 is strongly supported by the evidence of the obverse details. The ANS specimen is also from the Ispahān mint but of year 20 of Kobād I's reign.

The silver drachm of Firōz is dated tentatively by Chu and Ch'in to the second year of Firōz's reign, 460, and the mint identified, also tentatively, as Zarang.²⁹ The attribution cannot be correct for several reasons. First, the obverse type was adopted later than the second year of Firōz's reign. For example, the crown with its double wings of the god of victory was the third crown that Firōz wore during his reign and was adopted after his release from captivity.³⁰ As for the reverse type, the king's name — sometimes in abbreviated form — and the mint always appeared to left and right of the fire altar attendants except on coins issued during the third and eighth years of Firōz's reign when the king's name was replaced by the regnal year. Only once did both the king's name and the regnal year appear together in left field with the mint monogram in right field; this was during the second year of Firōz's reign.³¹ The coin in question does not, however, belong to this special category. What is in left field is the letter م (M) and not two (Trin) as Chu and Ch'in claim.³² The mint attribution of Zarang also cannot be correct. On the rubbing the mint monogram seems to be AB or AI. If it were AB it would mean Abarshahr or Nishāpūr but it is more likely AI which is another unidentified mint.³³ The ANS

²⁷ Göbl, p. 51.

²⁸ See Göbl, tab. 16 and Paruck, pp. 376, 464 and pl. 31.

²⁹ PLATE XXV, 10. See Table II.

³⁰ Göbl, p. 50.

³¹ Göbl, p. 50.

³² The usual abbreviated form for two is ت ل ی ن (TLYN), Göbl, tab. 16.

³³ Göbl, p. 82. Neither Göbl nor Paruck attempted to interpret the monogram AI (Paruck, p. 133).

specimens have obverses similar to that of coin 10 and their reverses also have the letter M in left field. The mint monogram on coin J is AB (Abarshahr) and that on coin K is RYW (Rām-Ardashīr).³⁴ Neither coin is dated.

The discovery of these Sasanian silver coins in T'ien Tzū Yü and Yaohsien certainly increases our knowledge of Persia's Sasanian coinage, especially in the case of coins of great scarcity like those of Bōrān's. More important, the finds help explain the total absence of gold and silver coinage in ancient China.³⁵ The availability of foreign gold and silver coins in China, through trade and tribute, lessened the need for domestic mintage, particularly when the demand for them was not large in the first place. The two major sources of foreign gold and silver coins were the Roman and Persian empires.³⁶ The origin of the coins was, by and large, of little concern to the Chinese because foreign coins were valued according to the content of precious metals in them, and quite often issues were melted down before they could enter into circulation.

The discovery of these coins in China is historically significant; the coins bear witness to the close contact between Sui-T'ang China and the Persian world. The sites where the Sasanian coins have been found are all situated in the northwestern part of China, along the ancient "silk road," or in the south along the coast where the important trading ports were, or in or near the two capitals (Ch'angan and Loyang) of T'ang which were the cultural and economic centers of the nation.³⁷ The discovery of the relatively scarce drachm of Queen Bōrān in Ch'angan serves as another piece of concrete evidence of the fact that the Sino-Persian relation, whether cultural or economic, was an extremely close one. From historical sources we know that in the early decades of the seventh century, Ch'angan was "literally crowded with foreigners—thousands of members of the official embassies which came periodically

³⁴ PLATE XXV, J, K. See Table II.

³⁵ Here the term coins is used in the strictest sense of the word, vis-à-vis the copper cash of ancient times, because there certainly was no lack of gold or silver ingots—in the form of *ting* or *ping*—for large commercial transactions or gifts.

³⁶ P'eng Hsin-wei, *Chung Kuo Kuo Pi Shih* [History of Chinese Currency] (Shanghai, 1965), p. 235.

³⁷ Chu and Ch'in, pp. 131, 132.

from all over Asia, and still larger numbers of merchants, soldiers, monks, and jugglers and other entertainers attracted to this, the greatest metropolis of the world.”³⁸ In fact, the size of the foreign population was such that temples dedicated to the various types of Near Eastern religions, including Zoroastrianism (the fire-worshipping religion of Persia), were erected in Ch’angan to serve the needs of the foreign residents.³⁹

TABLE I

<i>Coin</i>	<i>Diameter</i> (cm)	<i>Weight</i> (gm)	<i>Date</i>	<i>Mint</i>
1	3.3	4.0	37 = 626	AYR? = ÉRĀN (SUSA)
2	3.3	4.1	35 = 624	RIU = REV-ARDASHIR
3	3.3	4.0	39 = 628	NIH = NIHAVAND
4	3.3	4.1	37 = 626	Sh I ? = SHIRAJAN?
6	3.2	3.6	27 = 616	DA = DARABJIRD
7	3.2	2.7	25 = 614	BISh = BISHAPUR
A	3.1	4.13	37 = 626	AYR = ÉRĀN (SŪSA)
B	2.9	3.36	35 = 624	RYW = RĀM-ARDASHĪR
C	3.2	4.15	37 = 626	NYH = NIHĀVAND
D	3.2	4.14	37 = 626	SR = SHĪRAJĀN
E	2.8	2.93	27 = 616	DA = DĀRĀBGIRD
F	3.1	3.49	25 = 614	BISH = BĪSHĀPŪR

³⁸ Edwin O. Reischauer and John K. Fairbank, *East Asia: The Great Tradition* (Boston, 1960), p. 176.

³⁹ Reischauer and Fairbank, pp. 176–7.

TABLE II

<i>Coin</i>	<i>Diameter</i> (cm)	<i>Weight</i> (gm)	<i>Date</i>		<i>Mint</i>
5	3.2	4.1	1 = 630	SK	= SAKASTAN
G	3.3	4.11	1 = 630	AHM	= HAMADĀN
8	3.2	4.0	13 = 543	ST	= ISTAKHR
H	2.8	4.03	25 = 555	ST	= ISTAKHR
9	2.9	4.2	11 = 510	AS?	= ?
I	2.9	3.92	20 = 508	AS	= ISPAHĀN
10	2.75	3.8	2? = 460?	ZR?	= ZARANG?
J	2.7	3.69	—	AB	= ABARSHAHR
K	2.7	3.61	—	RYW	= RĀM-ĀRDASHIR

THE COINS OF NORTH CAMBODIA

(PLATE XXVI)

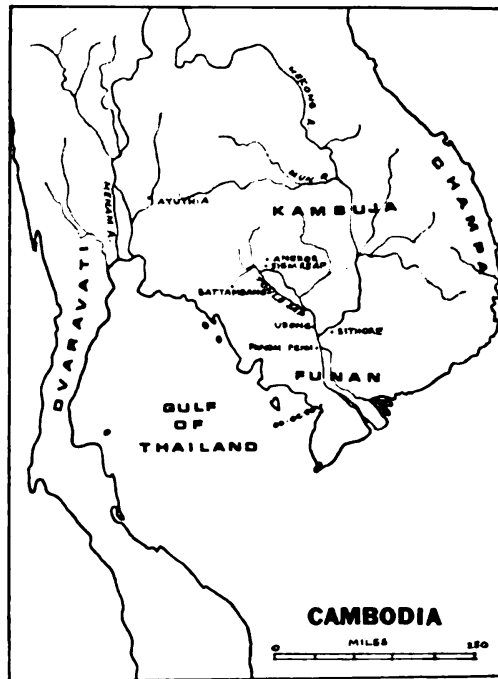
CHARLES K. PANISH

About an hour after sunrise on January 26, 1858, a French scientist named Henri Mouhot, exploring an area in northern Cambodia between the Menam and Mekong Rivers, cut through the heavy undergrowth in the Great Lake area and obtained his first view of Angkor Wat. Mouhot had been commissioned by the London Geographical Society to verify, if possible, earlier stories told by hunters of a massive array of buildings buried in the jungle and quite forgotten in later times. He explored a sufficiently large area to uncover dozens of stone structures, deserted, ruined and desolate. On his return to Europe, however, reports of his discovery were not widely believed. And it wasn't until 1898 that the École Française d'Extrême-Orient was formed to explore the ruins and publish the results.

Since that time a considerable amount of research has been accomplished, largely under French auspices, and a fairly detailed rationale of the early history and development of the area has been reconstructed. It now appears that, during the first century A.D., an exodus occurred from India to southeast Asia which implanted over successive centuries a Buddhist-Hindu culture throughout the entire area from Java, through Sumatra and Malaya, northward nearly to China. With this imported culture came not only new religions—Sivaism, a form of Hinduism, and Mahayana Buddhism—but also a Saka calendar, a Sanskrit court language and an architecture which, in the words of Mouhot, "has perhaps never been equalled in the whole world."¹ The two nuclei of this grand architecture today are at Angkor in Cambodia and at Barodudur in Java.

The Khmer Kingdom of Cambodia is first recorded in history ca. A.D. 100 as occupying a limited area in the Mekong River valley just

¹ Henri Mouhot, *Travels in the Central Parts of Indo-China (Siam), Cambodia and Laos*, 2 vols., London, 1864.



below its junction with the Mun. It was immediately north of and feudatory to the Funan Empire in the Mekong delta within the limits of present-day South Vietnam. The Funanians were world traders who, thru their port Go-Oc-Eo on the Gulf of Thailand, maintained commercial relations with China, India and the Mediterranean states. About A.D. 500 the Cambodians threw off the Funan yoke and absorbed their former suzerain within their expanded borders. Historians call this new Cambodian kingdom Chenla, from the Chinese who so recorded it. But indigenous records indicate that it was locally known as Kambuja after the mythical creator of the state, Kambu Svayambhuva (whose name means "self-creating"), and from which derives the modern name Cambodia. To the east of Kambuja was the Kingdom of Champa and to the west Dvaravati (now Thailand) both of whom were frequently at war with their neighbor. As a result of these wars, Cambodia, at its peak in the 15th century, ruled much of Thailand, South Vietnam and Laos.

At its zenith, the center of Khmer activity was at Tonle Sap, the great lake west of the Mekong River. Here was founded, early in the 9th century, the capital city later known as Angkor Thom. The name

Angkor Thom is relatively modern (17th century), being derived from the Sanskrit word *nagara* meaning city, and the Pali word *dhama* meaning great.

Actually Angkor Thom is only one of many names associated with this locality, primarily because of the strange propensity of the Khmer kings to move their capital at every change in reign and sometimes in between. As a result, there are numerous structures within a thirty-mile distance of the present town of Siem Reap. Perhaps the most famous of these is Angkor Wat (more properly Varah Visnulokah), a funerary temple dedicated to Vishnu, which was constructed according to Briggs² by Suryavarman II (A.D. 1113–1150).

The so-called Angkor period of Khmer history covers the years between A.D. 802, when Jayavarman II declared his independence of Java, and 1431 when the Thai of Ayuthia captured the Khmer capital and sacked it. At that time the Thai placed a puppet on their victim's throne, but he was killed after about a year by the heir-apparent, Ponhea Yat (1432-1467), who had himself crowned instead. On his accession, for reasons of security, Ponhea Yat moved his capital from Angkor south to Basan and a year later to the vicinity of the present Khmer capital, Phnom Penh ("the hill of the Lady Penh").

Although Angkor subsequently was rebuilt (ca. 1576), it never again became the royal residence; and the early tradition that each king build himself a new monument came to an end. Slowly, over an extended period, the inhabitants of Angkor emigrated south; and by the 17th century Angkor was virtually forgotten. The few residual residents settled in the towns of Siem Reap and Battambang in the great lake area.

With the movement of the capital from Angkor, a slow decline of the Khmer Empire began. By 1593 the Thai had captured the whole of the Angkor region, and within a year thereafter had made all of Cambodia a vassal state. Although the Khmer later reasserted their independence, they were under repeated attack from the Thai on the west and the Vietnamese on the east, both of whom appropriated large sections of their territory. Modern Cambodia was reborn in 1847 when

² L. P. Briggs, "The Ancient Khmer Empire." *Transactions of the American Philosophical Society*, 1951, p. 190.

King Ang Duong (1841-1859) was formally invested at Udong under dual Thai and Vietnam vassalage. Shortly thereafter Cambodia came under French protection when Norodom (1859-1904), son of Ang Duong, signed a treaty in 1863. However, not until 1907 were the provinces of Battambang and Siem Reap, together with the ruins of Angkor, returned to Cambodian jurisdiction. Following an eclipse of French hegemony by the Japanese from 1941 to 1945 and a return to Cambodian independence in 1953, the monarchy was abolished and the Khmer Republic emerged in 1970.

Reverting to an earlier period, it is strange indeed that the rulers in southeast Asia, who so freely adopted the Indian culture in the first and subsequent centuries, did not at the same time evolve a system of coinage patterned after the contemporary Indian prototype. For a long period barter was the general rule in southeast Asia; and such coinage as was finally adopted appears to have been largely influenced by the Chinese "sycee" (privately issued silver ingots) rather than the official Chinese coinage which had been issued in copper since ancient times.

Perhaps the earliest coinage of southeast Asia was produced in Java, where small globular coins in gold and silver have been found which bear on their obverse the Nagari letter *ja*, and have an incuse reverse. Millies³ has attributed these to the "Djenggala" Empire which existed during the Hindu period from A.D. 896 to 1158. However, it is not unlikely that these coins were, in fact, issued somewhat later during the late 12th or early 13th century. Similar coins with a different Nagari initial (mostly *ma*) were issued about the same time in Sumatra, in the city called Fansur by Marco Polo. Of Thailand, LeMay⁴ thought—based upon calligraphic style—that the "pack-saddle" (K'a K'im) money of north Siam was a product of the 14th century; but he also considered that the "bracelet" money from the same place may well have preceeded it by several hundred years. In southern Thailand, the so-called "bullet" money was purportedly first issued by the fabled K'un Ram K'amheng (ca. 1275-1315).

³ H. C. Milles, *Recherches sur les monnaies des indigènes de l'archipel indien et de la péninsule malaise*. The Hague, 1871.

⁴ R. LeMay, "The Coinage of Siam." *Journal of the Siam Society* Vol. 25 pt. 1 (Bangkok, 1932), p. 14.

In upper Burma, Arthur Phayre⁵ found no evidence that coins were struck except in relatively recent times; but in Arakan to the southwest he found otherwise. Here a regal coinage was first struck as a declaratory act of sovereignty about A.D. 1440 when King Mengtsaunwan, after fleeing to Bengal while under attack from Burma, later returned to Arakan to issue silver coins of Bengali type. Phayre further states that several centuries before this Bengali-type coinage, local princes in Arakan issued coins bearing religious symbols, but without date and occasionally without legend. These he thought were medals patterned after similar pieces issued in past ages in India and Ceylon. However, similar specimens in the Indian Museum in Calcutta were believed by Vincent A. Smith⁶ to be coins issued by the Chandra dynasty who reputedly reigned in Arakan between 788 and 957.

In general, it would appear that virtually all countries of southeast Asia with the possible exception of Burma had established some system of coinage by the end of the 13th century or the beginning of the 14th. Yet students of Khmer history generally seem to share the consensus that Cambodia did not produce a coinage until the 15th or even the 16th century.

Thus, according to Sahai, "Cambodian chronicles inform us that it was the usurper Kan (1499 or 1512—1505 or 1526 A.D.) who introduced the coinage in his kingdom and declared it a royal privilege to issue coins."⁷ Groslier⁸ states that the record is silent as to when Cambodian coinage was initiated, but that this could not have been much before the 15th century and was definitely later than the 13th. Ghosh echoes the same refrain, "Lack of any mention of coins [in inscriptions] as well as numerous references to quantities of gold and silver show that Cambodia of the late middle age [A.D. 802–1431] had no system of coinage, and used crude bars of gold and silver as medium of commercial transactions of any importance."⁹

⁵ A. P. Phayre, *Coins of Arakan, of Pegu, and Burma*. (London, [1882]), p. 1–2.

⁶ V. A. Smith, *Coins of Ancient India* (Calcutta, 1906), p. 331.

⁷ S. Sahai, "Medium of Exchange in Ancient Cambodia" *JNSI*, Vol. 33, Pt. 1 (1971), p. 93.

⁸ G. Groslier, *Recherches sur les Cambodgiens* (Paris, 1921), p. 30.

⁹ M. Ghosh, *A History of Cambodia* (Calcutta, 1968), p. 136.

Thus, despite some evidence to the contrary, most historians seem to agree that no mint ever existed at Angkor and that Cambodia did not develop a system of coinage until after the close of the Angkor period (A.D. 1431). Yet no historian has ever explained why coins came to be issued at Battambang (and possibly occasionally at Siem Reap) from the 17th until the 20th century in a locality which was isolated from the Cambodian capital both geographically and politically, and could only have had its genesis out of an earlier Angkor coinage now unknown to us. John Bowring gave the most fleeting support to this latter view with his statement, "The ancient coinage of Cambodia has been replaced by the moneys of Siam."¹⁰

There seems to be no question that a coinage did not exist in pre-Angkor Cambodia. Sahai's¹¹ research on the medium of exchange in use through the 8th century reveals the existence of only one unit of value for precious metals at that time, the tamlin (also tamlung), which is clearly a weight, the Khmer equivalent of the Chinese tael. Sahai concluded, however, that by the close of the 9th century "fixed metallic units of barter . . . formed the basis for some sort of quasi-currency."

It is reported that Marco Polo visited Angkor in 1292 (the date varies with different authorities) on his return from China to Europe; but on the subject of Khmer currency his memoirs are silent. Several years later the Mongol Emperor Timur Khan (Yuan Chên) dispatched an embassy to the Khmer capital which arrived in 1296. A member of this delegation, Chou Ta-Kuan, kept a journal of his observations over a two-year period of residence at Angkor. This was translated by two French savants, Abel-Rémusat and Pelliot, whose versions differ but slightly. The former gives, "Dans les petits marchés on fait des échanges de riz ou d'autre grains, ou de marchandises chinoises. Dans les marchés plus considerables, on vend des toiles, et, dans les grandes affaires, on traite des matières d'or et d'argent."¹² Although this statement is rather ambiguous, it has been interpreted generally to mean that barter was the sole basis for the dispersion of goods in Angkor during the late 13th century.

¹⁰ J. Bowring. *The Kingdom and People of Siam*. 2 (London, 1857), p. 25.

¹¹ Sahai, *JNSI* 1971, pp. 102-104.

¹² J. F. Abel-Rémusat, *Nouveaux mélanges asiatiques*. 1 (Paris, 1829). p. 135.

The first Portuguese missionary visited Cambodia in 1528, but it was some years before definite data on its coinage was made available to the western world. The missionary Gabriel Quiroga de San Antonio, who visited Angkor in 1595 had this to say, "Ay en este Reyno moneda propria de oro y plata, y son las armas un gallo, una culebra, un coraçon, y en medio del una flor: a la mayor llaman Maiz, y es como Real: otra ay que tiene tanta plata, como medio real, y llaman mi pey, la tercera se llama fon, y es como un quartillo."¹³ This may be paraphrased as follows, "This kingdom has its own coinage in gold and silver on which is inscribed a cock, a serpent or a heart with a flower in the center. The largest coin is called a mace and is like a (Portuguese) real. Another of half value is called a mi-pey (one pey). And a third, called a fuong, is like a quarter real."

That Angkor was still a "live" city at this time is attested to by his statement that the principal cities are "Anchor, Churdumuco and Sistor" (now Angkor, Phnom Penh and Sithor respectively).

Quiroga may have been somewhat in error in his description of the devices on the coins, since from the later coinage which has come down to us we can recognize that his "cock" was possibly a hamsa bird, his "serpent" possibly a lotus flower with long stem and root, and his "heart" perhaps a coconut.

Quiroga's denominations are of interest in that they are all primarily weights, a feature not uncommon among other coin denominations throughout the world, and one which raises the central point here at issue: When does a unit cease to designate a weight and become a coin name? It is the answer to this question which will determine when Cambodia issued its first coinage.

Gabriel Quiroga may have been further in error in designating the mi-pey as a half real and the fuong as a quarter, as a comparison with the known Cambodian weights of a later date will show. The following relations were abstracted by Temple¹⁴ from several sources: 4 pey (also pei) = 1 fuong; 2 fuong = 1 sleng (also salong or mace); 4 sleng = 1

¹³ A. Cabaton, *Brève et véridique relative des évènements du Cambodge* (Paris, 1914), p. 9.

¹⁴ R. C. Temple, "Currency and Coinage among the Burmese." *Indian Ant.*, 1898, p. 3.

bat (also baht or tical); 4 bat = 1 tomlong (also damleng or tael). It will be noted that the foregoing Khmer weights are almost identical with those of Thailand; and Temple was unable to determine whether "the Cambodian scale came from Siam or the Siamese scale from Cambodia." However, he leaned toward the latter assumption based upon Ridgeway's statement that "The Siamese coins, known also to Cambodia, were the weight and *money* unit of the *ancient* Cambodians"¹⁵ (emphasis added). Naturally there is some variation in the actual weights of the units in question, primarily because they were differently reported by various sources. A random sampling of the reported weight of the fuong will illustrate this point:

<i>Item</i>	<i>Fuong (gm. wt.)</i>
Siamese weight (Bowring, 1857)	2.25
Siamese coin (Schroeder, 1868)	1.904
Cambodian coin (Cabaton, 1750)	2.10
Cambodian weight (Moura, 1883)	1.174
Cambodian weight (Cabaton, 1914)	1.172

Although Gabriel Quiroga would clearly seem to establish that coins were issued at Angkor at the time of his visit in 1595, there is some evidence that coins were issued at an even earlier date. Groslier cites an inscription of 1444 at Angkor Wat which he quotes from Aymonier: "The grandmother Bos has made a gift of silver to the Neang Mol, 1 damleng, 3 bat, 1 sleng, 1 pey."¹⁶ Groslier was of the opinion that this inscription referred to weights of metal; but the progressive array of these units would strongly suggest that they were gift coins instead, rather than weights so meager in amount as to be unworthy of record as a gift. If indeed such was the case, it would now appear that Angkor had a coinage during the early 15th century.

There are two nodal points about this time in Khmer history which might have provided the stimulus for the issuance of coins. One of these was the capture and sack of Angkor by the Thai in 1431. In this case, the imposition of a new political authority might well have provided

¹⁵ Temple, *Indian Ant* 1898, p. 4.

¹⁶ Groslier, *Recherches*, p. 31.

the impetus. On the other hand, in consideration of the facts that this action was essentially destructive in nature and that at this time the Thai had only an ingot type coin of their own to serve as a pattern, it would appear that this occasion could not likely serve for the purpose.

Somewhat earlier another change in hegemony occurred at Angkor, this time of a religious nature. During the latter half of the 13th century Hinayana (Theravada) Buddhism, which had been introduced in Cambodia from Ceylon, displaced the previously dominant Mahayana sect. Later, about 1350, King Jayavarman Paremsvara (A.D. 1327–1353?) himself adopted Hinayanism;¹⁷ and at the same time Sanskrit was displaced by Pali as the language of the inscriptions. Such an influx of Singhalese culture at the court of Angkor may well have brought with it the concept of a coinage which was already well developed in Ceylon. If this hypothesis has merit, then it follows that the coins described by Gabriel Quiroga might well first have been issued at Angkor about the middle of the 14th century. Such a monetary pattern of performance in Cambodia is not out of phase with that of its neighbors in the same field.

Unhappily none of these early coins seems to have come down to us. At least, the coins we now have fail to evidence the degree of weight control necessary to support Quiroga's recitation of units and allocate fractions. In point of fact, the coins now known display such a randomness both in weight and fineness of metal as virtually to preclude any but the vaguest assessment of their monetary value. This state of affairs may have been due to the operation of many private mints under little or no government control. The changes in metal fineness were most probably a progressive debasement in times of inflationary pressures.

Considerations of style and fineness of metal indicate that the earliest extant coins probably date from the latter half of the 17th century. These coins are of silver about 0.7 fine, weight about 1.5 gm., and probably represent a fuong. In regard to them, Hamilton wrote in 1720, "In Cambodia their only coin is a *galls*, a small piece of coarse silver with characters on one side. Its value is 4d. sterling."¹⁸ Kelly's

¹⁷ Briggs, *Trans Amer Philos Soc*, 1951, p. 253.

¹⁸ J. Pinkerton, *Collection of Voyages* 3 (London, 1809), p. 522. P. Kelly, *The Universal Cambist* (London, 1835), p. 103.

Universal Cambist of 1835 quotes Hamilton verbatim except to call the coin a *gall*. This name clearly refers to the fuong bearing the device of a "cock," in Portuguese *gallo*.

Later coins are both heavier and lighter in weight, but are made of billon of decreasing fineness. By the middle of the 19th century, they become almost pure copper with a silver wash. These silver washed coins were known as *takung takom* in the area of Battambang. By the end of the 19th century, even the silver wash was lost; they then had a value of one pey and traded as equal to one centime or a quarter of a Malay cent. These copper pieces were sometimes called *sleng*, a misnomer carried over from the earlier silver coins of Angkor which had about the same weight. All of these coins were uniface.

During the latter part of the 19th century, only one mint was apparently in operation, run under the aegis of the provincial viceroy at Battambang. Until 1880 all coins were hand struck or cast; but in that year the Indian mint master arranged for the import of European machinery¹⁹ and thereafter, until the closure of the mint about 1902, the coins were machine struck. These latter coins, the first of the north Cambodian series which were not uniface, bear the figure of a *krut* bird (garuda, the vehicle of Vishnu) on the obverse, and on the reverse an inscription in old Khmer *Preah Dambaan* which means "the sacred club" and is possibly a name for Battambang. These coins were initially of copper with a silver wash; but many specimens without the wash are now encountered and it is possible that the later coins were so struck. Specimens of this coinage struck in gold have been encountered; but they are probably presentation pieces or medals and not part of the monetary system. The machine-struck copper coins appear to have continued in circulation in Battambang and Siem Reap until as late as 1907 when sovereignty of the area was transferred from Siam back to Cambodia under French jurisdiction.²⁰

Appended is a list of these coins keyed to the list compiled by Groslier.²¹

¹⁹ Administration des monnaies, *Rapport au ministre des finances* (Paris, 1901), p. 284.

²⁰ H. A. Ramsden, "The Coins of Battambang." *Numismatic and Philatelic Journal of Japan* Vol. 3 No. 6, Yokohama, June, 1914), pp. 201-7.

²¹ Groslier, *Recherches*, pp. 32-4.

This note would not be complete without some reference to two other coinages associated with Cambodia but not part of the series herein considered. The first and earliest of these is called *praq sema* (*praq* is the Khmer word for silver or money, and *sema* is the device on the piece, a marker designating the boundary of consecrated ground). This is a large silver piece, first noted by Malleret²² from a find near the ancient port of Go-Oc-Eo and ascribed by him to the Cambodians of the Funan period. However, Malleret seems to have been mistaken in this assumption, as the pieces in question appear to be Burmese medals of a much later date. These may well have circulated in Cambodia, along with other foreign coins, but they did not form a part of the indigenous monetary system.

The second coinage of collateral interest is called *praq bat* (i.e. tical money) or *praq prasat* (tower money). This was the first national currency of Cambodia. It was struck in 1847 at Udong for the investiture of Ang Duong, and consists of five values, three in silver and two in copper. The silver coins were machine struck on a press furnished by J. Ingram & Co., of Birmingham; the coppers were hand struck. The silver coins have a hamsa bird with the date on the obverse and the towers of Inthapat (an ancient name for Angkor) on the reverse. The largest coin in silver occurs in two modules, 30 and 35 mm. in diameter, both weighing 15.2 gm. and valued at one tical (see Davenport no. 147).²³ These coins are unique in carrying the 1847 date of issue in four different eras. The two smaller coins are the 1/4-tical or salong and the 1/8-tical or fuong. The copper coins of this issue, one pey and one att, follow the earlier tradition of the north Cambodian coinage, bearing, *obv.*: garuda bird and blank reverse. These are included in the appended table so that they may be distinguished from the north Cambodian issues.

Not in the *praq bat* monetary series, but struck about the same time was a pattern 3-tical piece (Davenport no. 146) also dated the equivalent of A.D. 1847. Also struck about the same time were some trial pieces of the silver coins in a pewter-like metal.

²² L. Malleret, *L'archéologie du delta du Mekong*. 3 (Paris, 1962), p. 134.

²³ J. S. Davenport, *The Dollars of Africa, Asia and Oceania*. (Galesburg, Ill., 1969), p. 71.

EARLY CAMBODIAN COINS: CATALOGUE

MINTED AT BATTAMBANG (AND SIEM REAP AS NOTED)

*Silver and billon 1-fuong values, except as noted, issued ca.
A.D. 1650-1850*

No.	Groslier Fig.	Description
1a	—	Hamsa facing l., erect body and full tail. A finely cut early issue (14.5 mm., 1.6 gm.).
1b	8a	Hamsa facing l., full tail and vine in mouth (13-14 mm., 1.2-1.5 gm.).
1c	8d	As 1b but stubby tail (12-17 mm., 1.4-1.7 gm.).
1d	8j	As 1c but double weight (1 sleng value) (18-20 mm., 3.0-5.1 gm.).
1e	—	As 1c, but bird's body consists of three horizontal lines in high relief (10-15 mm., 1.6-1.7 gm.).
1f		As 1e but bird has triangular body (13-16 mm., 1.5-1.6 gm.).
1g	8c	As 1c but circle to l. of bird (12-17 mm., 1.4-1.6 gm.).
1h	—	As 1c but cross to l. of bird (13-15 mm., 1.2-1.3 gm.).
1i	—	As 1c but nest to l. of bird (13-14 mm., 1.1-1.4 gm.).
1j	—	As 1i but bird faces r. (13-15 mm., 1.2-1.9 gm.).
2a	80	Garuda facing left, arms raised and holding nagas (snakes). From Siem Reap (14-16 mm., 1.3-1.4 gm.).
2b	8n	As 2a but without nagas (13-14 mm., 1.3-1.4 gm.).
2c	—	As 2c but arms lowered (13-15 mm., 1.4-1.6 gm.).
3a	8g	Lotus bud on stem coiling counter-clockwise (8 mm., 0.3-0.4 gm.).
3b	—	As 3a but double weight (10 mm., 0.6-0.7 gm.).
3c	—	As 3a but stem coils clockwise (8-9 mm., 0.3-0.4 gm.).
4a	—	Lotus bud rising out of water (13-16 mm., 1.6-1.9 gm.).
4b	9b	Open lotus flower in water. (15 mm., 1.3-1.6 gm.).
4c	—	As 4b but framed in beaded circle. (15 mm., 1.5-2.1 gm.)

- 5a 8b Cocoa bean (recorded by de San Antonio as "heart").
From Siem Reap. (10–12 mm., 0.8–1.0 gm.).
- 5b – As 5a but half size. (8 mm., 0.4–0.5 gm.).
- 6 8m Mule facing l. (12–15 mm., 1.2–1.4 gm.).
- 7 9d Horse facing r. in beaded circle (13–15 mm., 1.5 gm.).
- 8a – Crab (14–16 mm., 1.8–1.9 gm.).
- 8b 8i As 8a but half size (10–11 m., 0.8–0.9 gm.).
- 8c – As 8a but quarter size (6–7 mm., 0.2–0.4 gm.).
- 9a 8l Peacock facing r. (14 mm., 1.5–1.6 gm.).
- 9b – As 9a but crested head and degraded style (14–15 mm.,
1.4–1.6 gm.).
- 9c – As 9a but peacock holds lotus in mouth (15–16 mm.,
1.5–1.8 gm.).
- 9d – As 9a but die cut in reverse (12–15 mm., 1.3–1.4 gm.).
- 10 9e Elephant facing r. (13–16 mm., 1.4–1.6 gm.).
- 11a 9f Hippogriff facing r. (13–15 mm., 1.4–1.5 gm.).
- 11b As 11a but double weight (14–16 mm., 2.7–2.9 gm.).

UNKNOWN MINT

Hand-struck copper, late 19th century.

- 12a – Hamsa facing r. Type as 1b but thin flan and degraded
style (11–12 mm., 0.5–0.8 gm.).
- 12b – Hamsa facing l. Similar to 12a but half size (10–12 mm.,
0.2–0.3 gm.).
- 12c – As 12b but half size (8–9 mm., 0.1 gm.).

MINTED AT BATTAMBANG

*Hand-struck uniface copper with silver wash, called Praq
Pey, issued ca. A.D. 1850–80.*

- 13 8f Hamsa facing l. with Chinese character *chi* (luck) in square
frame, above (12–15 mm., 1.0–1.5 gm.).

Machine-struck copper with silver wash, value 1-pey, issued ca. A.D. 1880–1902.

- 14a – Garuda facing l., in beaded circle. *Preah Dambaan* in old Khmer script inscribed on reverse. (14 mm., 1.0–1.5 gm.).
- 14b – As 14a but dies recut (13.5 mm., 2.0–2.1 gm.).

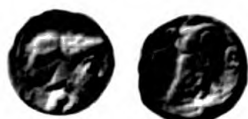
MINTED AT UDONG

Hand-struck, uniface copper called Praq Bat, issued ca. A.D. 1847.

- 15a – Hamsa facing l. with partial date above (2-att or 1-pey value). (15–16 mm., 4.0–4.6 gm.).
- 15b – As 15a but half size (1-att). (13–14 mm., 1.4–2.5 gm.).

PLATES

I



1



1 (2 x)



2



2 (2 x)



3



3 (2 x)



4



5

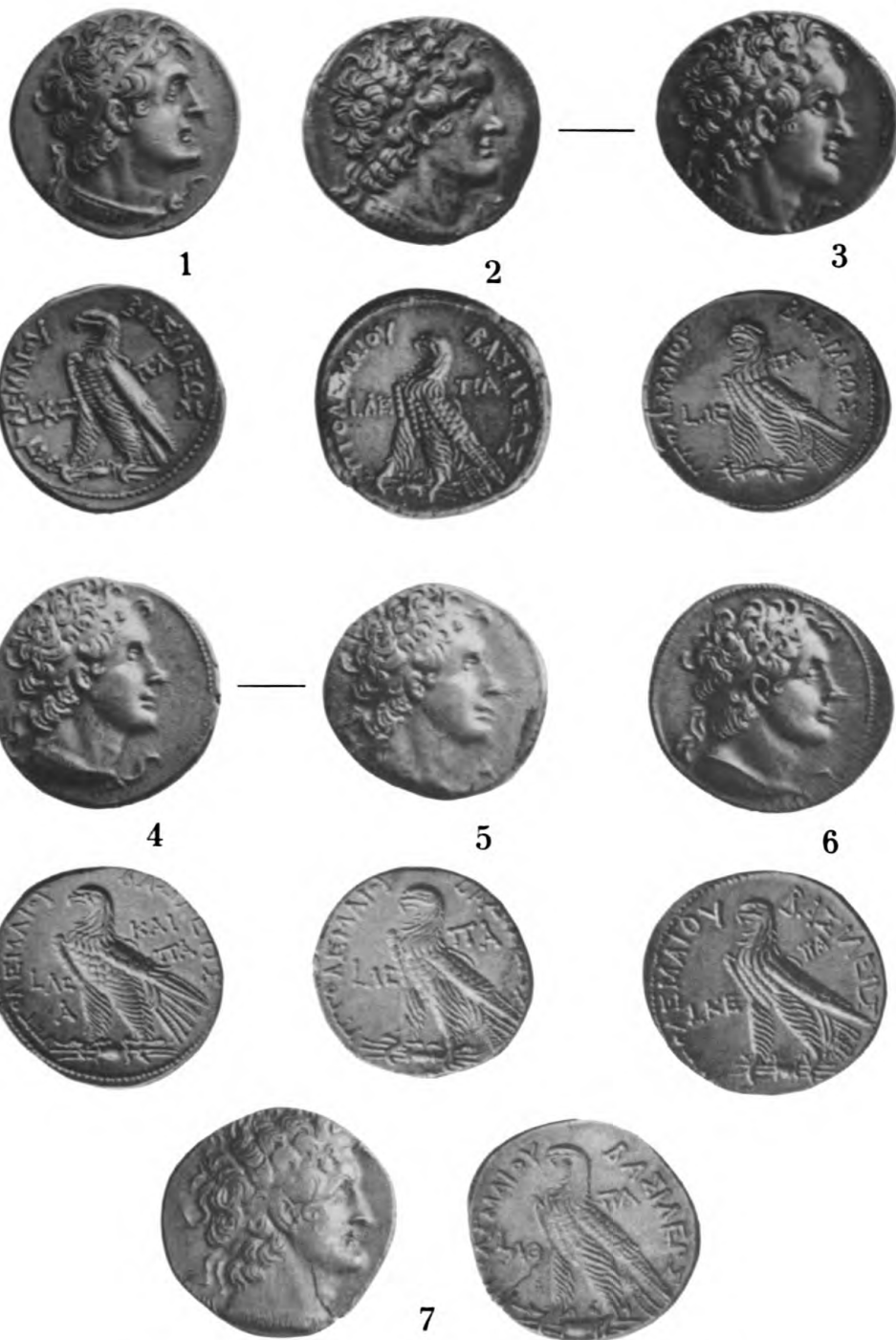


6



7

UNPUBLISHED ATHENIAN BRONZE COINS



DATED SILVER OF ALEXANDRIA

III



DATED SILVER OF ALEXANDRIA



DATED SILVER OF ALEXANDRIA

V



1



2



3



4



5



6



7



DATED SILVER OF ALEXANDRIA



1



2



3



4



5



6

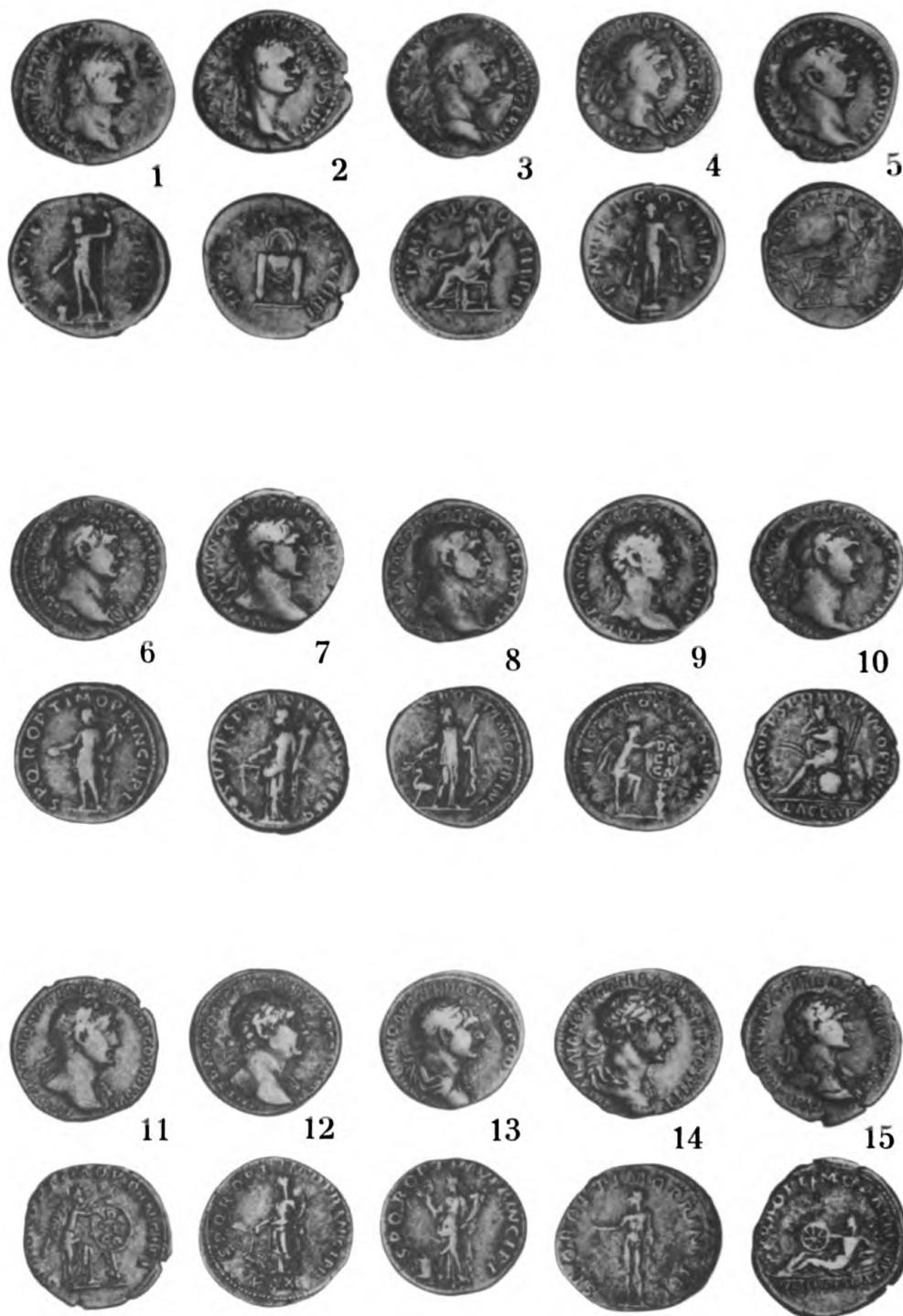


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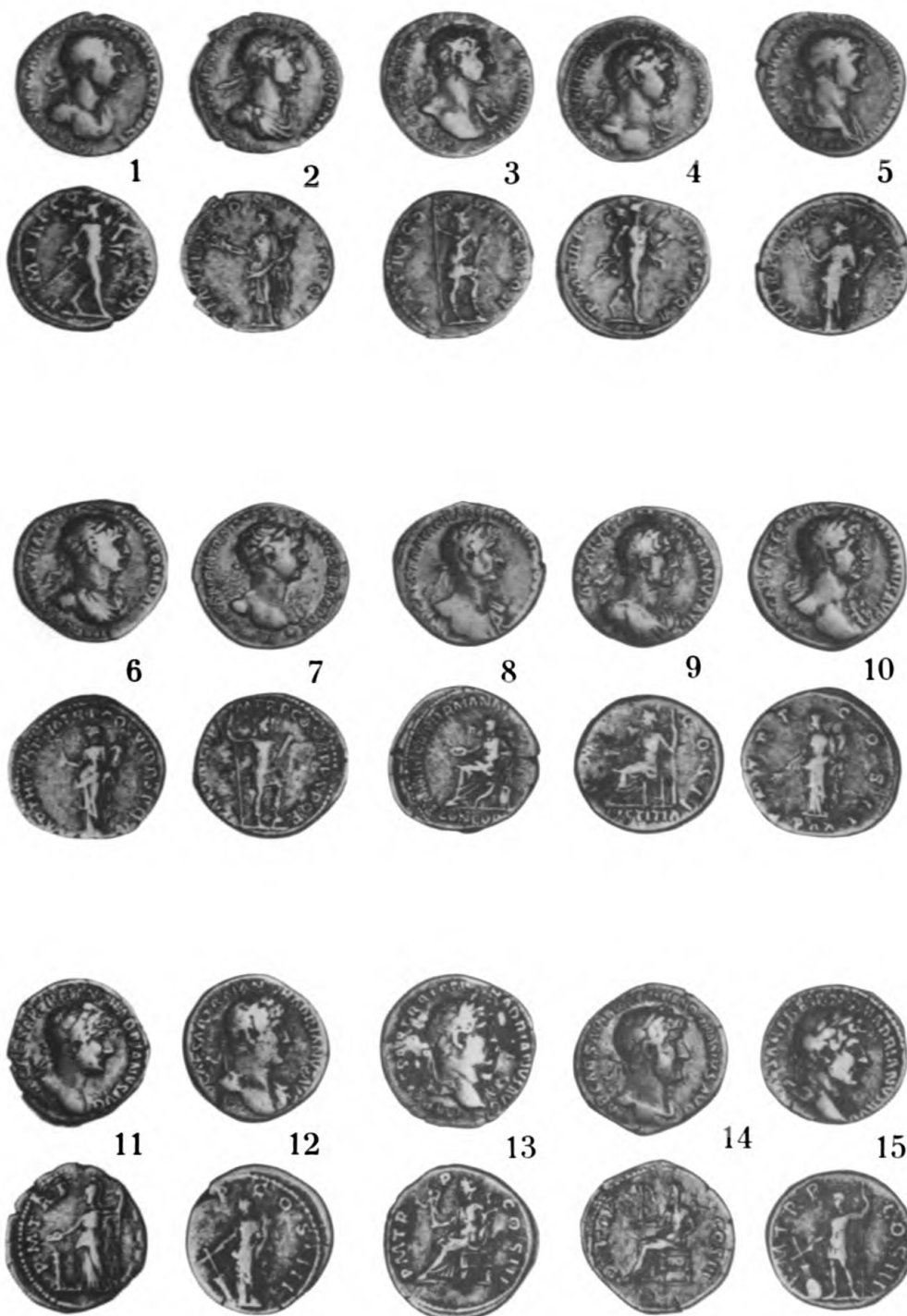
DATED SILVER OF ALEXANDRIA

VII



TELL KALAK HOARD

VIII



TELL KALAK HOARD

IX



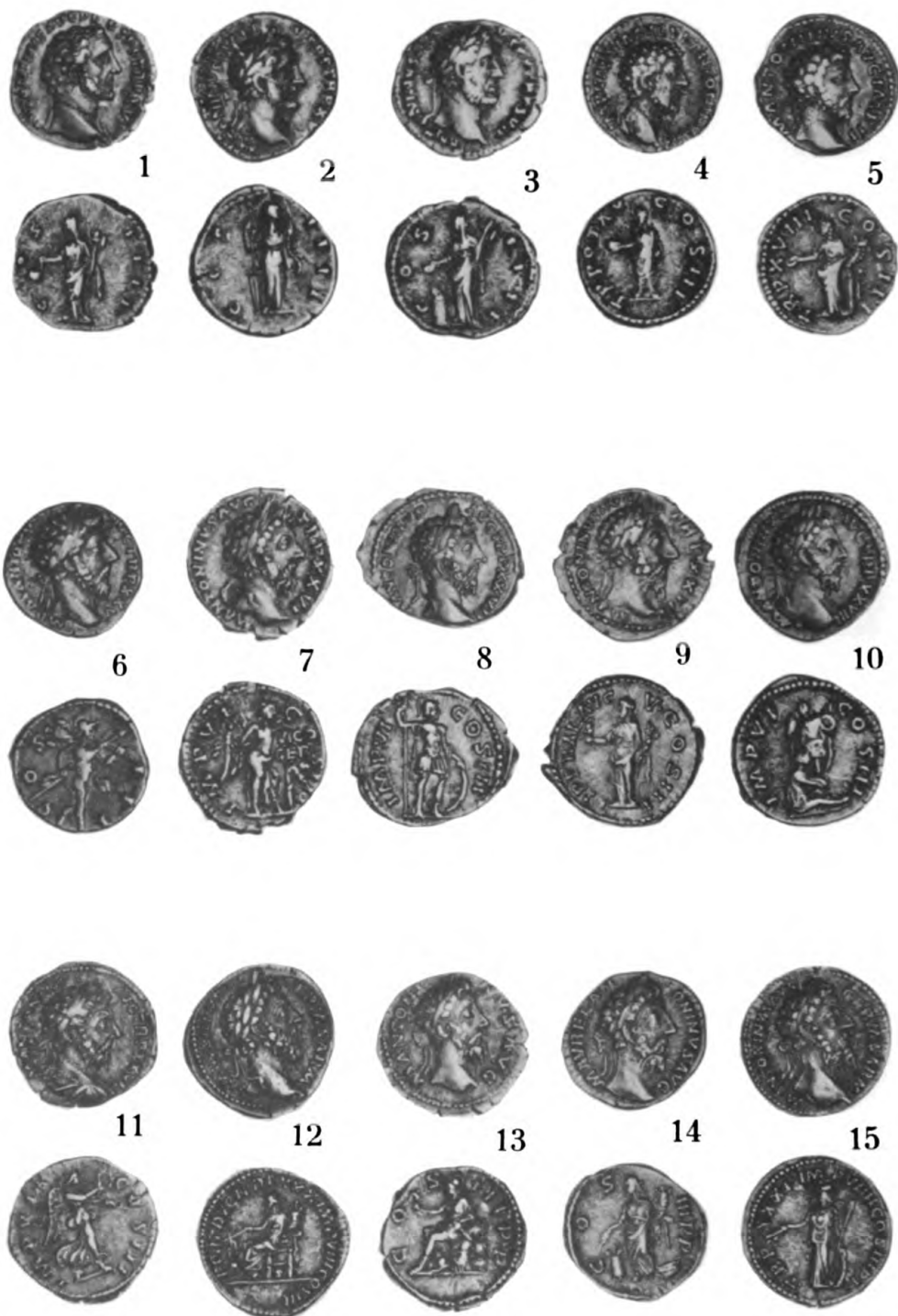
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X

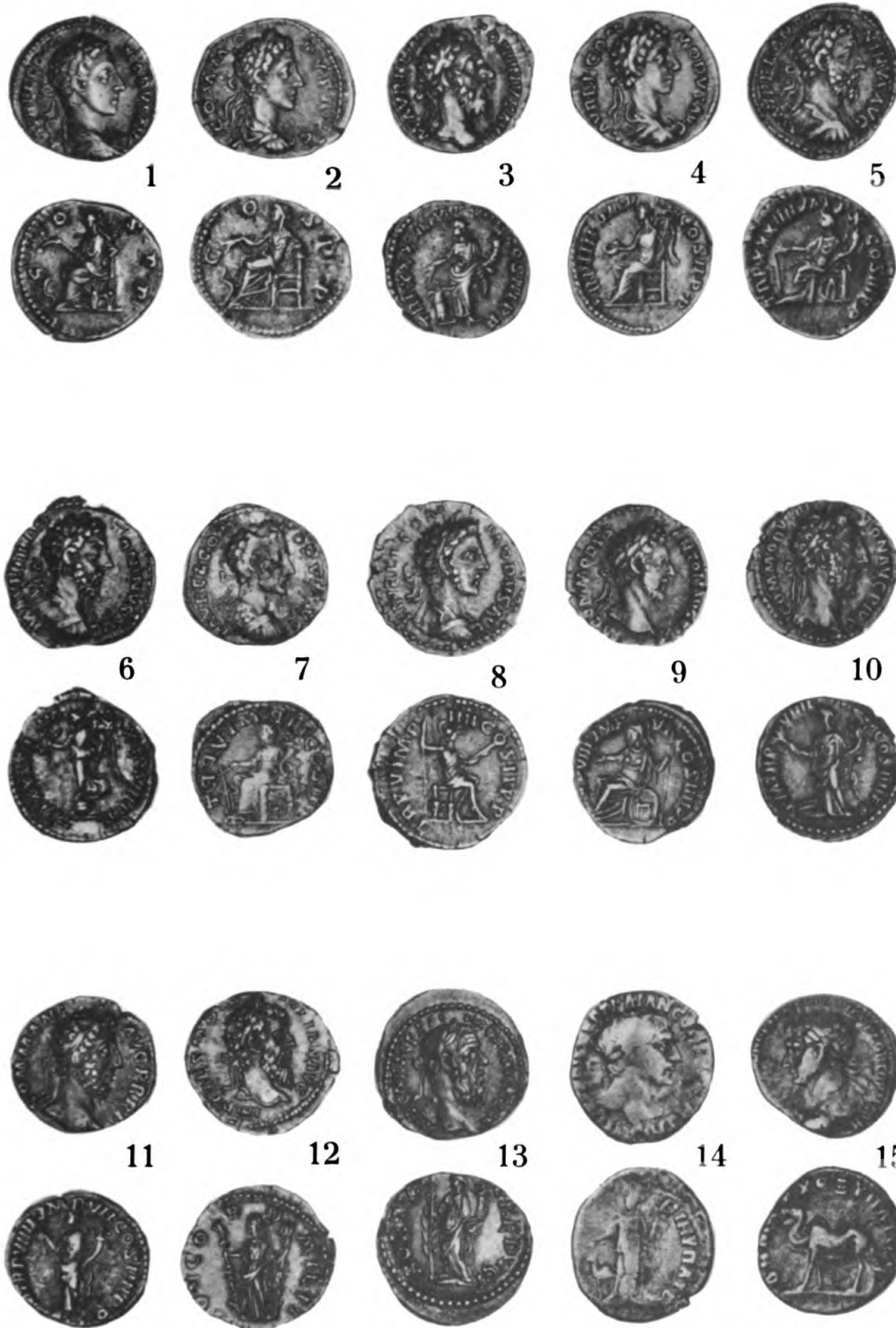


TELL KALAK HOARD

XI



TELL KALAK HOARD



TELL KALAK HOARD

XIII



TRAJAN'S ARABIAN MINT

XIV



TRAJAN'S ARABIAN MINT



HERACLIAN HOARD FROM SYRIA

XV



50



51



52



67



68



74



HERACLIAN HOARD FROM SYRIA

XVI



80



90



106



108



109

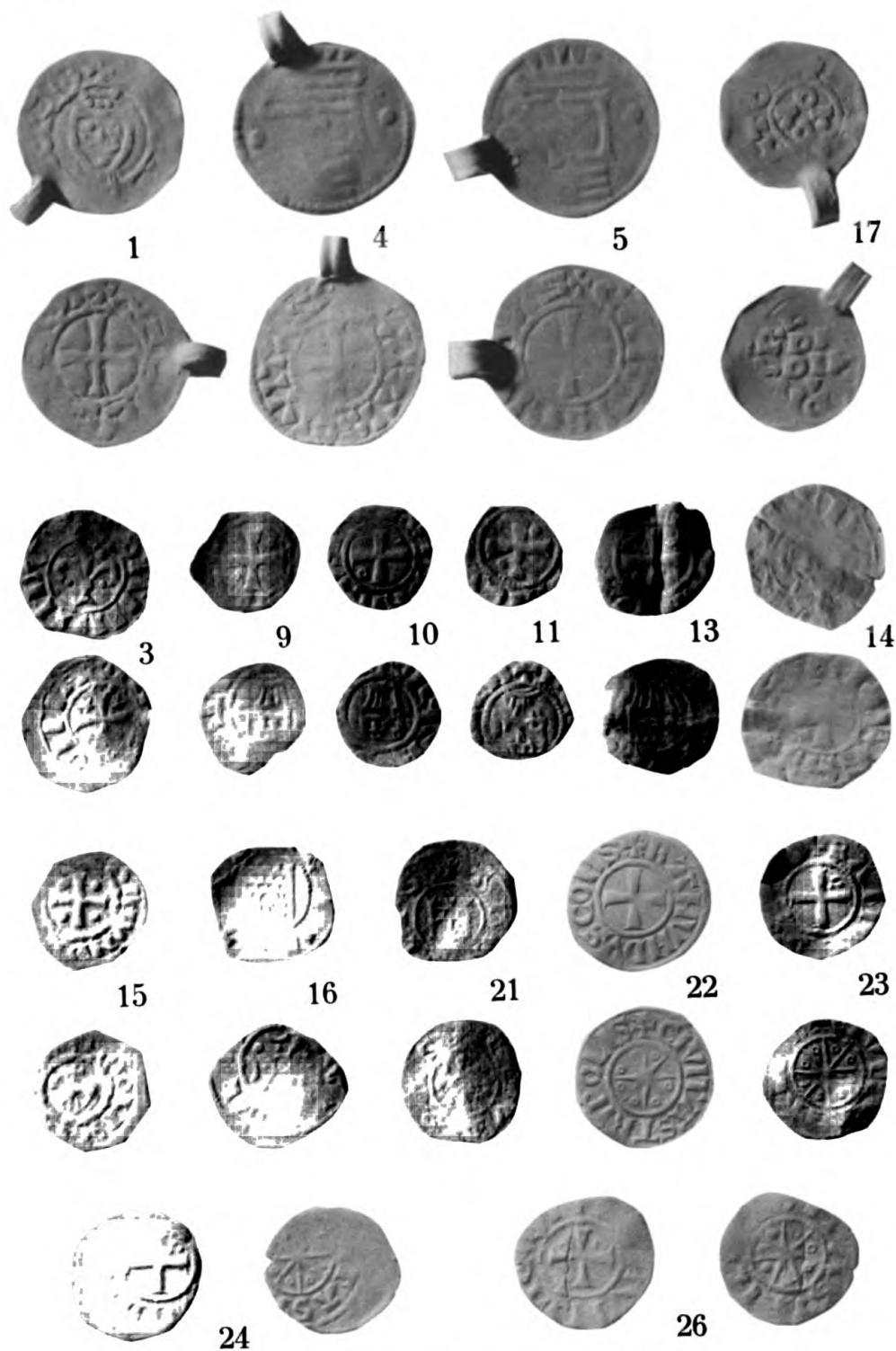


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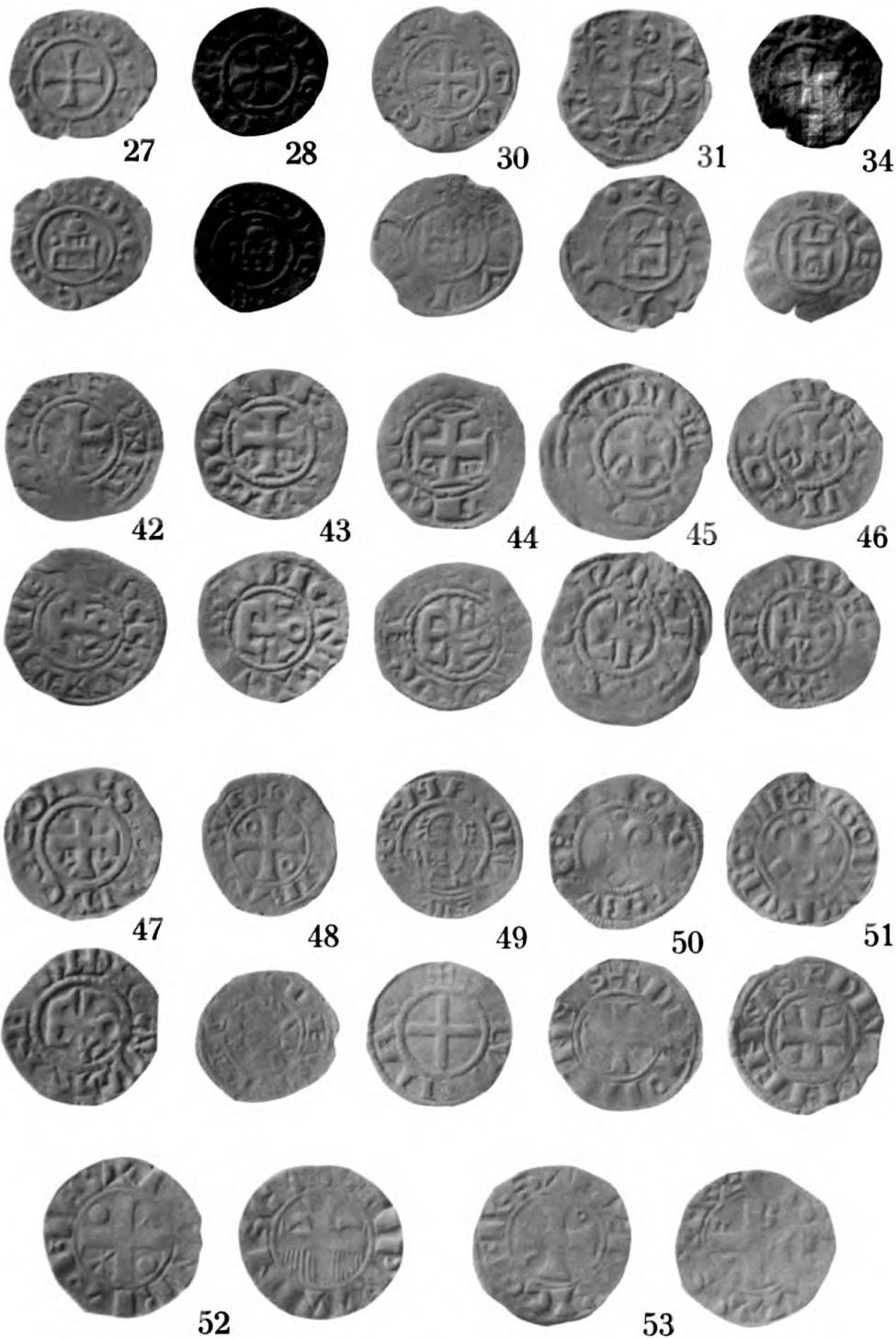
HERACLIAN HOARD FROM SYRIA

XVII



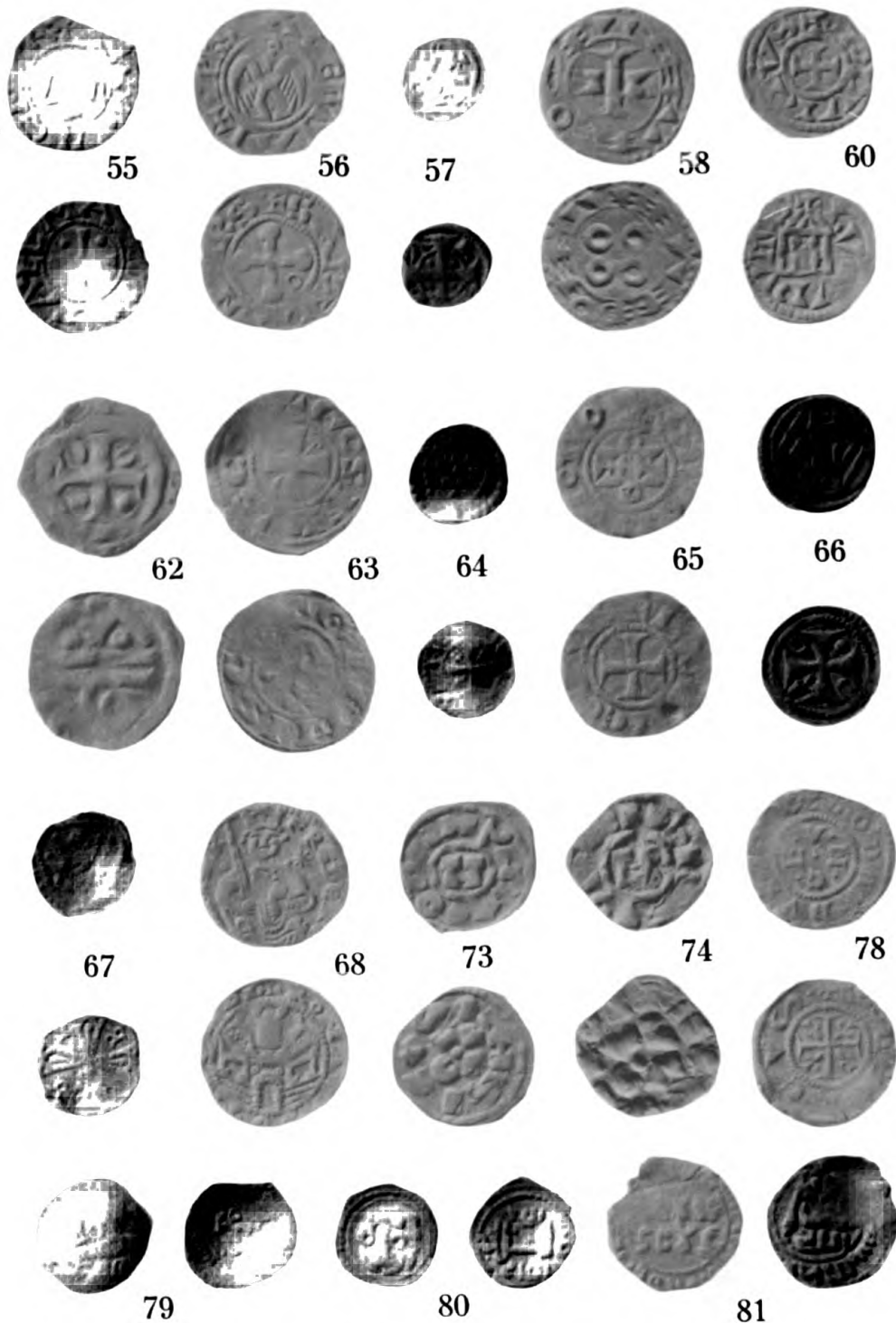
CRUSADER FINDS 1 AND 2

XVIII



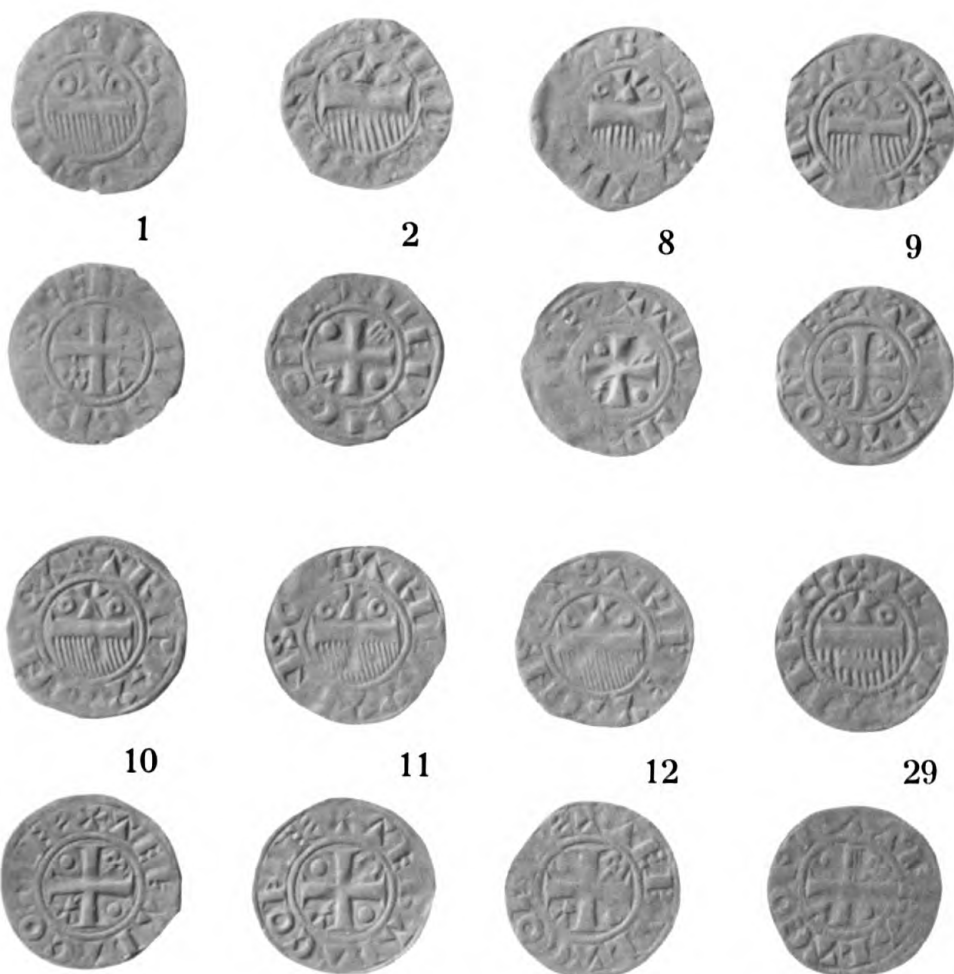
CRUSADER FINDS 2

XIX

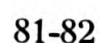


CRUSADER FINDS 2

XX



CRUSADER FINDS 2 AND 3



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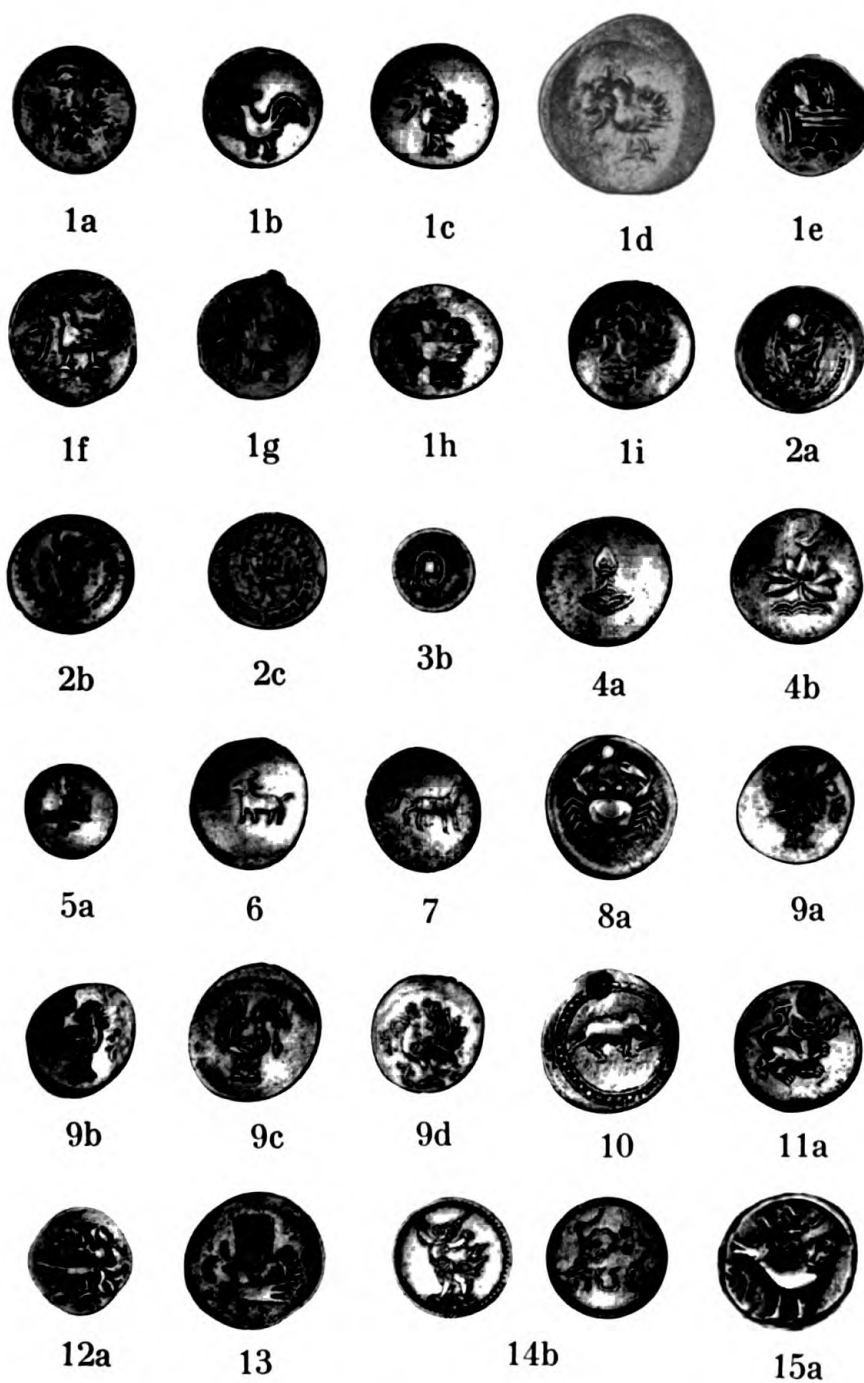
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SASANIAN HOARDS IN *KAO KU*



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THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

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THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

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PRINTED IN BELGIUM AT CULTURA, WETTEREN

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THREE RECENT GREEK ACCESSIONS

(PLATE I)

NANCY M. WAGGONER

In ANSMN 12 an article was devoted to several noteworthy Greek accessions. In the decade that has since elapsed, most new acquisitions of special merit have received notice in the Society's *Annual Report* for the year in which they were acquired. A few pieces have been withheld for further study and fuller publication, among them the three coins that are here accorded the attention they deserve. All coins illustrated in the present article are in the possession of the ANS unless otherwise indicated.

SIDE ca. 480 B.C.

1. *Obv.*: Pomegranate between two long leaves.

Rev.: Head of Athena in Attic helmet; in front, dolphin upward;
all within a square incuse.

⌘ Stater. 10.71 ↓

In her study of this Pamphylian mint, Sabahat Atlan publishes a tetrobol in the Berlin cabinet (PLATE I, A) bearing this obverse type.¹ It is distinguished by the addition of two leaves to an otherwise typical Side motif. The only ostensible difference on the reverse of the tetrobol is the direction of the head, which faces right, although one might also note the unusual variation in engraving technique that has produced the small raised triangle in the lower lefthand corner of the stater.

The Berlin fraction is included in Atlan's group II, dated 479–460 B.C., for which there are recorded 18 staters as opposed to 4 tetrobols.

¹ *Sidenin milattan önce V. ve IV. yüzyıl sikkeleri üzerinde araştırmalar* [Untersuchungen über die Sidetischen Münzen des V. und IV. Jahrhunderts v. Chr.] (*Türk Tarih Kurumu Yayınlarından V. Seri-Sa. 23*) (Ankara, 1967), pp. 65 (no. 10), 118–21; pl. I. The tetrobol is illustrated with the kind permission of Hans-Dietrich Schultz.

While, at the time, no staters were known to Atlan which corresponded to her no. 10, she remarks that such must once have existed since in that period at Side there were always staters to match the fractions. The larger denomination is herewith provided.

On coins of Atlan's group II which have the Athena reverse, the helmet is described as bound by an olive wreath. From the illustrations in her study this is not always apparent to the eye. The wreath certainly has not been added on our new stater; nor is it visible on the Berlin tetrobol. Atlan's early dating of groups I and II (490–460, inclusively) had been questioned by Colin Kraay who, on grounds of style and fabric and comparisons with certain Lycian issues, suggested that the two groups be downdated to the decade 460–450.² It was considered probable by both authors, however, that the wreathed Attic helmet at the Side mint reflects the influence of Athenian coins to which the wreath was added shortly after Athens's victory over the Persians in 479. New hoard evidence from Egypt³ now strongly supports the Atlan dates; and the lack of olive wreath on our stater lends further credence to her chronology—if, indeed, one must accept the appearance of the olive wreath at Side as the result of its occurrence first at Athens.⁴ It may well be, in any case, that the issue illustrated here is transitional between Atlan's groups I and II.⁵

² "Notes on the Mint of Side in the Fifth Century B.C.," *NC* 1969, pp. 18–19. The dates for early inscribed Lycian issues proposed by Otto Mørkholm, "The Classification of Lycian Coins Before Alexander the Great," *JNG* 1964, p. 69, have now been revised upward in the light of the hoard mentioned in note 3, below, which contained two specimens (nos. 769–70) with Kuprilli's name (see Mørkholm, "The Coinage of Kuprilli," *Acta Archaeologica* 1972, pp. 75–76).

³ This evidence pertains to a large hoard of archaic Greek coins buried ca. 475 B.C. (*IGCH* 1644), published by Martin Price and Nancy Waggoner, *Archaic Greek Silver Coinage* (London, 1976). Nine specimens from the hoard, now in the ANS collection, are published as nos. 152 (Alexander I), 244 (Delphi), 250 (Carystus), 713 (Caria Uncertain, no. 3, below), 754 and 768 (Lycia), 775 (Side), 818 and 831 (Cyrene). No. 775 is a unique drachm which must belong to Atlan's group 1.

⁴ As Atlan herself declares (pp. 119–20), the wreath occurs on both Attic and Corinthian helmets at several mints in Asia Minor between the fifth and second centuries B.C.

⁵ Kraay, in a personal communication, concurs in this possibility, with specific reference to the relatively small Athena head, adding that the dolphin symbol may be a vestige of the earlier reverse type.

ISSUS ca. 380 B.C.

2. *Obv.*: Apollo in himation, l.; patera in r. hand; l. hand grasping trunk of laurel tree; below r. arm, ΙΣΣΙ[-KON]; above, ΑΠΑΤΟΠΙΟΥ; all within circular dotted border.

Rev.: Heracles standing facing, head r., with club in r. hand; in l., bow and arrow; lion skin over l. arm; on r., ankh sign; in upper l., wreath symbol.

⌘ Stater (overstruck). 10.37 ↓

This stater from Issus on the Cilician coast shares a pair of dies with an ANS specimen from a Cilician hoard published by E. T. Newell (PLATE I, B).⁶ That we should find no. 2 overstruck on a stater of the Cypriote king, Euagoras I (411–374 B.C.), from Salamis, can perhaps tighten its date of issue and elucidate to some extent the significance of the wreath symbol and Cypriote ankh sign on the Issus coin, bearing in mind that the ankh served as central reverse type on earlier coins struck at Salamis.

Coins of Euagoras (PLATE I, C)⁷ bear the head of Heracles r. on the obverse, and a goat recumbent r. on the reverse. If our no. 2 is viewed upside down, the back portion of the Heracles head is visible on the left half of the coin. On the reverse, if viewed in like manner, the goat's horn and ear are outlined.⁸

The Issus issue has been dated to the first quarter of the fourth century, just preceding those that bear the name of the Persian satrap, Tiribazes. His coins were struck at various Cilician mints (a province which he did not govern), and are to be associated not with his capacity as satrap, but with his role as commander of the naval forces in the Persian war against Euagoras between 386 and 380.⁹ Babelon recognized that the

⁶ "A Cilician Find," *NC* 1914, pp. 1–33, no. 72 (*IGCH* 1259). It is highly unlikely that the 48 Persian sigloi listed actually formed a part of this deposit.

⁷ This specimen is no. 85 from the Cilician find cited in note 6 above.

⁸ The plausible explanation given by Newell for ΑΠΑΤΟΠΙΟΥ is as an epithet for the deity it accompanies, possibly in connection with an Apaturia festival at Issus.

⁹ E. Babelon (*Les Perses achéménides, Catalogue des monnaies grecques de la Bibliothèque nationale*. (Paris, 1893), p. xxix), emphasizing the military character of satrapal coinage, states specifically that Tiribazes struck coins not in his satrapy of Ar-

coinages of the Persian kings, their satraps, local dynasts, and the autonomous coinages of Greek cities, could have been struck concurrently.¹⁰ However, he had reservations about accepting these Issus coins as an autonomous issue, suggesting rather the possibility that they were struck under the authority of Tiribazes, just prior to those types which bear his name; i.e., before 386.¹¹

The Persian invasion of Cyprus was instigated by the attempt of Euagoras around 390 to gain control of the entire island, and the plea of Citium, Soli and Amanthus for Artaxerxes to intervene. Although the war lasted for ten years from start to finish, the last three or four years saw the decisive defeat and submission of Euagoras, ultimately on terms of Tiribazes's bidding: Euagoras would retain his throne; but his realm would be confined to Salamis, and he would pay annual tribute as vassal to the Persian king.

It was in Cilicia that military forces were mobilized and from there that Persian expeditions set out, Issus being one point of concentration. The latest coins in Newell's Cilician hoard, all in almost mint condition, were those of Euagoras, Tiribazes, and the Issus specimen (no. 72 from the Cilician find). There is no quarrel with Newell's burial date of ca. 380. Tiribazes died in 380 and in 379/378 Pharnabazes began prepara-

menia, nor in that of Lydia, but in Cilicia while organizing the war against Euagoras and equipping the fleet destined to conquer Cyprus. Orontes was the satrap charged with mustering the land forces. The historical account of these involvements with Euagoras is gleaned basically from Diodorus XIV.98 and XV.2-4; 8-9,2.

¹⁰ Babelon, *Perses achéménides*, pp. xxi, xxiii.

¹¹ E. Babelon, *Traité*, vol. 2 pt. 2 (Paris, 1910), pp. 855-58, nos. 1372-73. In addition to an issue possibly with the remnant letters ΙΣ and probably to be identified with Tiribazes (*Traité*, vol. 2 pt. 2, no. 576, basically Issus types except that Baal replaces Apollo), Tiribazes struck coins with Baal/sundisk supporting Ahuramazda half-figure (Newell, *NC* 1914, no. 73 from the Cilician find, struck at Soli), and those which bear his portrait (Newell, *NC* 1914, no. 75, also from the Cilician deposit and struck at Soli. The satrap's name does not occur on this specimen; but see *Traité*, vol. 2 pt. 2, no. 578). The neuter ending to the city legend troubled late nineteenth century numismatists. However, P. Gautier points out in "Légendes monétaires grecques," *Numismatique antique: Problèmes et méthodes*, (Nancy/Louvain, 1975), pp. 166-67, that the genitive plural and the neuter occur interchangeably on citizen coins, as Babelon made clear (*Traité*, vol. 2 pt. 2, pp. 852-55). In this instance, however, Babelon's reservations may be justified.

tions for military operations against Egypt from Acre in Phoenicia (Diodorus XV.41,1–3). Sufficient disturbance at the time could have caused the burial of the hoard. We would question only the dating of the relatively small Issus issue represented in it, suggesting that, instead, it was a victory coinage struck under Tiribazes ca. 380, some over coins of Euagoras that were coming in as tribute money. The wreath and ankh thus symbolized his defeat.

“CARIA UNCERTAIN” ca. 530–525 B.C.

3. *Obv.*: Palmette with five rounded petals and two vertical volutes set apart by a central ovule with rolled border.

Rev.: Square incuse with irregular striated surfaces divided into two parallel rectangles by a broad central band.

⌘ Stater. 14.71

This stater is one of two, struck from the same pair of dies, that were recently recovered from the Egyptian hoard of archaic Greek coins that must have been secreted around 475 B.C.¹² The obverse type was hitherto known only from two similar fractions of uncertain attribution.¹³ Although our coin is damaged, distinctive features have been preserved: the number of petals, the vertical disposition of the volutes, their separation by the central core from which all five petals emanate, and the base upon which the whole appears to rest.

In the publication of the hoard from Egypt these two staters are attributed to an uncertain mint in Caria; first, because the reverse punch is characteristic of Carian silver, especially that of Camirus on the island of Rhodes (PLATE I, D); and second, because they are struck on the same undetermined weight standard employed at the Rhodian mint of Ialysus for her early two-type staters.¹⁴

¹² *IGCH* 1644. See note 3 above. The published catalogue numbers for these two staters are 712 (14.59 g after cleaning) and 713 (ANS specimen).

¹³ An obol in Copenhagen (*SNGCop* 337) and an unpublished hemiobol (0.50 g) in the British Museum, both seeming to conform to the Aeginetan standard. See note 14 below.

¹⁴ See H. A. Cahn, *Knidos* (*AMUGS* IV, Berlin, 1970), p. 190, who points out that at Ialysus on Rhodes during the period under discussion, fractions of Aeginetan

Closer scrutiny of the stater reverses has now led to comparison with early electrum staters of Euboic weight from the island of Samos. There is little question about the attribution, since three separate finds on the island itself have produced five of the six staters known, in addition to several fractions.¹⁵ The hoard evidence, such as it is, indicates only that these coins were minted before 560 B.C. Scholars may well be right in dating them before 600 if they are to be classified as "pre-coins" which are still without distinct obverse types. The Samian electrum, however, seem to bear types that are almost consciously obscured, as Robinson has pointed out. The pattern within the two rectangular incuses on the reverse bears an extremely close resemblance to that produced for the reverses of our new hoard piece and its companion.¹⁶

Although concluding that a Carian attribution is most likely, we make a brief reference in note 167 of the hoard publication to a close parallel between the palmette on the coins and that which decorates a bronze plaque from Samos (PLATE I, E).¹⁷ While there are compositional and stylistic differences, the striking feature which they share is the central ovule wedged between vertical volutes. Equally no-

weight were struck along with staters of an uncertain standard. The latter corresponds to that of our palmette issue.

¹⁵ *IGCH* 1158 (3 staters); E. S. G. Robinson, "Some Electrum and Gold Coins," *ANS Centennial Publication* (New York, 1958), p. 590, no. 8; *BCH* 82 (1958), p. 615, pl. L, 13. The early electrum of Samos is treated briefly by John Barron in his study, *The Silver Coins of Samos* (London, 1966), pp. 15-18, pl. XXX. Barron considers these electrum issues as "pre-coins" and thus would date them to the latter part of the seventh century. More recently, Liselotte Weidauer, in *Probleme der frühen Electronprägung* (Fribourg, 1975), especially pp. 108-9, adopts an earlier chronology for the beginnings of coinage, dating to the second quarter of the seventh century, the first coins with clear obverse types, and the pre-coins to the beginning of the century. We feel that such early dates are incompatible with the evidence from the Ephesian Artemision (see E. S. G. Robinson, *JHS* 1951, pp. 156-67).

¹⁶ Two separate rectangular punches have been employed for the reverse of the electrum; while the silver staters appear to have been struck from only one punch die. The difference in technique may be partially explained by the difference in metal, silver being harder than gold, as Barron (p. 19) explains.

¹⁷ E. Akurgal, "The Early Period and the Golden Age of Ionia," *AJA* 1962, p. 378, pl. 102, fig. 27. This is the illustration on the title page of an article by Ernst Buschor, "Altsamische Grabstelen," *Athenische Mitteilungen* 1933, pp. 22-46, from which our photo has been taken. Buschor refers to the plaque on p. 38.

table is the girdle that binds the whole motif together. This motif, as it appears on the plaque, is thought to represent an Aeolic capital, the architectural form from which the Ionic order presumably developed during the first half of the sixth century.¹⁸ The three essential elements of the Aeolic capital are the vertical volutes, a wedge-shaped palmette that emerges from the triangular space between the volutes and, below, a girdle of overhanging leaves. There are few such capitals extant. One is a restored capital, probably dating from the end of the seventh century from Neandria, near Troy in Turkey.¹⁹ Our coin lacks the overhanging leaves, which suggests other adornments such as acroteria, or anthemion found on funerary stelae. However, until the end of the sixth century on ornamentation with the volute-palmette combination, the petals fan upward and outward on thin stems from a very narrow central point that does not really separate the volutes. In the first quarter of the fifth century a new style is introduced in the Aegean in which schematized palmette leaves all spring full-blown from a central core, as on the coins and plaque;²⁰ but so far no exact parallels can be found for the wide separation of the volutes.²¹

No specific date is given for the plaque; but since the silver staters combine their unusual palmette motif with a reverse incuse punch remarkably close to Samian electrum coins, it is difficult to escape the

¹⁸ See the discussion by Akurgal, "Ionia," pp. 376-78. The canonic form of the Ionic capital was probably perfected by ca. 575, in the Greek cities along the coast of Asia Minor.

¹⁹ Akurgal, "Ionia," pl. 102, fig. 28.

²⁰ Buschor, *Athenische Mitteilungen* 1933, pls. XI-XVII, surveys the development during this period with several illustrated examples from Samos, as well as one from Thera and Paros. A similar anthemion on a Lydian funerary stela from Sardis, ca. 525-500, has been published in *AJA* 1974, p. 124, pl. 32, fig. 28.

²¹ It should be noted, however, that a similar treatment of the volutes does occur on Near Eastern fragments surviving from an earlier date. These have been published by James B. Pritchard, *The Ancient Near East. Supplementary Texts and Pictures* (Princeton, 1969): Palmettes that decorate an Assyrian ivory pyxis from the Burnt Palace at Nimrud (no. 796), and from Ramat Rahel a row of pillars from a window balustrade, ca. 608-587 B.C. (no. 799) and an Iron Age proto-Aeolian capital (no. 800). See also Y. Shiloh, "New Proto-Aeolic Capitals Found in Israel" *BASOR* no. 22 (April, 1976), pp. 67-77.

conclusion that the two pieces from the hoard are themselves somewhat later products of the Samian mint.

We have one other piece of numismatic evidence that might support a Samian provenance. In addition to a special series of lead coins with various obverse types issued by the Samian tyrant, Polycrates (until recently 532-522 B.C.) there exists an electrum plated copper (PLATE I, F).²³ All bear the typical Samian double rectangles on the reverse. It may not be coincidental that a double volute constitutes the obverse type on the plated copper.

When and why would the palmette issue have been struck on Samos? We know from a marble inscription recovered on the spot that around 525 or a little earlier two Perinthians made a dedication to the Heraion on Samos consisting of four objects: a gold gorgon (?), a silver siren (?), a silver phiale and a bronze lampstand, at a total cost of 212 Samian staters.²³ While the metal of these staters is not defined, Barron²⁴ concludes that 212 electrum staters would have raised the value of the objects far above their actual worth, that therefore the coins were of silver and that electrum was no longer being struck by 525 B.C. However, from about 530 (his beginning date for Samian silver) until 490, Barron has only fractions which can be assigned to the mint. He thus converts the 212 staters into 848 drachms "most probably Euboic," which he concludes were actually used to defray the cost of the dedication.

If the value of the dedication had been reckoned in the amount of 848 drachms, why would it not have been so recorded? The inscription is explicit in its reference not only to Samos as the source, but also to

²² Robinson, "Coins," p. 591, no. 9, there dated to the first half of the sixth century. Barron, *Silver Coins of Samos*, p. 17, note 19, would apparently include it within Polycrates' period of control, although struck separately from the lead. The beginning of Polycrates' rule has now been extended back to 540 by B. M. Mitchell, "Herodotus and Samos," *JHS* 1975, pp. 75-91, especially pp. 81-82. Thanks are extended to Dr. Martin Price for casts of this coin, now in the British Museum.

²³ *Supplementum Epigraphicum, Graecorum* vol. 12 (Leiden, 1955), p. 116, no. 391, lines 1-19, dated by the editors to 580/560. See now L. H. Jeffery, *The Local Inscriptions of Archaic Greece* (Oxford, 1961), p. 365, no. 35, who places the dedication historically no later than 512, but epigraphically as early as 525.

²⁴ Barron, *Silver Coins of Samos*, p. 18.

staters as the denomination of the coinage employed for this purpose: *διηκοσίων δωδεκών στατήρων Σαμίων*.

Could the new palmette staters from the hoard have been in fact among the 212 staters cited in the inscription? It is tempting to regard them as a special issue of about 530–525, whose obverse type referred directly to some aspect of the dedication.²⁵

Such an attribution poses difficulties in that it adds yet another obverse variety and apparently two more weight standards (if we include the fractions) to a mint already burdened, between 600 and 475, with electrum and silver coinages of several different types struck on five different standards.²⁶ Moreover, the palmette staters, albeit struck on an undetermined standard, are nevertheless of tetradrachm weight ($14.60 \pm$ g) and therefore much lighter than tetradrachms on the Euboic standard ($17 \pm$ g), the standard which Barron postulates was used for the dedication coinage. The question then arises whether the lighter-weight standard would have accommodated the total cost of the dedication. We can only reply, with Barron, that the description of the four offerings by the Perinthians remains ambiguous, and their precise size uncertain.

Ultimately, the choice of weight standard for the palmette issue and its connections remain unexplained. The near future will hopefully unravel the mystery still surrounding these handsome coins and permit their proper home to be found. Meanwhile, in spite of present reservations and until further evidence unfolds, Samos should be seriously considered a contender for the mint.

²⁵ This would raise the date of issue some 30 years or so above that given in our publication of the Egyptian hoard. At the same time, the composition of this hoard suggests that the beginning dates for the first Samian tetradrachm issues (499–495) and therefore for the earlier silver fractions, could possibly be lowered.

²⁶ See Barron, *Silver Coins of Samos*, p. 14: Euboic, Lydo-Milesian, "Heavy Samian," Persian, and Samian.

A NEW CHRONOLOGY FOR THE PRE-ALEXANDRINE COINAGE OF SIDON

(PLATES II-IV)

JOHN W. BETLYON

Among the peripheral and oft-neglected categories of ancient Greek coinage are the pre-Alexandrine issues of the Phoenician city of Sidon. Studies of this coinage were published by such scholars as Six, Head, Rouvier, Babelon and Hill; but problems of chronology and attribution remain.¹ In over 60 years no advances have been made in our understanding of these coins due to the lack of any new data. Recently, however, Dunand resumed excavations at Sidon.² Foremost among his discoveries is an inscription written in the lapidary Phoenician

¹ I wish to acknowledge my indebtedness and gratitude to Margaret Thompson, Nancy Waggoner and Professor Frank Moore Cross for their encouragement and thoughtful comments in regard to this paper. Any errors are the fault of the author. The basic works on the Sidonian coinage include the following: J.-P. Six, "Observations sur les monnaies phéniciennes," *NC* 1877, pp. 177-239, especially pp. 195-221; and "Le satrape Mazalos," *NC* 1884, pp. 97-159, especially pp. 144-51 and pl. 4, no. 11f; B. V. Head, *Historia Numorum* (Oxford, 1911), pp. 794-96; J. Rouvier, "Numismatique des villes de la Phénicie: Sidon," *JIAN* 1902, pp. 99-116, pl. 5 f; E. Babelon, *Catalogue des monnaies grecques: les perses achéménides, les satrapes et les dynastes de leur empire: Cypre et Phénicie* (Paris, 1839), pp. 228-36; and *Traité des monnaies grecques et romaines*, vol. 2 pt. 2 (Paris, 1910), pp. 543-608; and *BMCPHOENICIA* (London, 1910), pp. lxxxvii-cii and 139-54. This paper is not a catalogue of the pre-Alexandrine Sidonian coins. For information relating to hoards of these coins, see *IGCH* and P. Naster, "Le développement des monnayages phéniciens avant Alexandre, d'après les trésors," *Proceedings. International Numismatic Convention, Jerusalem, 27-31 December, 1963* (Tel Aviv, 1967), pp. 3-24.

² Excavations resumed at Sidon in 1963 after a hiatus of more than 35 years. Preliminary reports have been published by M. Dunand as follows: *Bulletin du Musée de Beyrouth* (hereafter *BMB*) 1965, pp. 105-9; 1966, pp. 103-5; 1967, pp. 27-44; 1969, pp. 101-7; and "Sondages archéologiques effectués à Bostan-Ech-Cheikh, près Saïda," *Syria* 1926, pp. 1-8. See also W. Röllig, "Beiträge zur nordsemitischen Epigraphik (1-4)," *Die Welt des Orients* 1969, p. 121, note 51.

script of the early fourth century B.C. The new inscription contains the names of four previously-unknown Sidonian kings.³ This new information enables us to launch a reexamination of the pre-Alexandrine Sidonian coinage, and to propose a revised chronological scheme for these issues.⁴

³ The inscription was first published by Dunand in "Nouvelles inscriptions phéniciennes du temple d'Echmoun à Bostan ech-Cheikh, près Sidon," *BMB* 1965, pp. 105–9, especially pp. 106–9. Dunand chose to date the inscription in the third quarter of the fifth century (pp. 107–8), following the probable reign of Ba'lishallim II. A recent photograph of the inscription, however, has allowed epigraphists to date the script with more precision (J. Teixidor, "Bulletin d'épigraphie sémitique," *Syria* 1972, p. 433). E. T. Mullen, Jr., has argued that the script is to be dated to ca. 400 B.C. ("A New Royal Sidonian Inscription," *BASOR* 1974, pp. 27–28). Mullen's dating of the inscription is feasible, but a date closer to 380 B.C. is even better. Some letter forms, such as *dalel* and *shin* are clearly paralleled with forms from the Tabnit inscription of the mid-fifth century; other letters, such as *yod*, *kaph*, *mem* (with its nearly vertical stance), and *šadeh* (with its having been rotated nearly 90 degrees to the left from the forms known from 'Eshmun'azor of the mid-fifth century to forms closer to those of 'Umm el-'Amed of the late fourth or early third centuries) are later in style. The first quarter of the fourth century is a safer dating for the inscription. See J. B. Peckham, *The Development of the Late Phoenician Scripts* (Cambridge, Mass., 1968), pp. 66–69, pls. 5–6, and p. 76, note 25. The text of the inscription reads as follows:

הסמל ז אש יחז בעלשלם בן מלך בענא מלך צדנם
בן מלך עברא <ש>מן מלך צדנם בן מלך בעלשלם מלך
צדנם לאדני לאשמן בען ידל יברד

"This is the image which Ba'lishallim, son of King Ba'āna', king of the Sidonians, son of King 'Abd'eshmun, king of the Sidonians, son of King Ba'lishallim, king of the Sidonians, gave to his lord, to 'Eshmun, at the spring Yidlal, (that) he may be blessed." See Mullen, *BASOR* 1974, pp. 25 f. for the detailed discussion of the translation of the inscription. The new kings are Ba'lishallim I, 'Abd'eshmun, Ba'āna'. and Ba'lishallim II. Following Mullen, we have emended the reading '*bd'mn* to '*bd'shmn*, as the result of a haplography. Note, however, that the name could well be '*bdhmn*—'Abdhammōn; see F. L. Benz, *Personal Names in the Phoenician and Punic Inscriptions* (hereafter *PNPPI*) (Rome, 1972), pp. 154, 312–13. It will be shown below how these names appeared on the coinage of Sidon in their abbreviated forms. The problem of dating the dynasty of 'Eshmun'azor has been well treated by Peckham, *Late Phoenician Scripts*, pp. 84 ff. For a review of the appropriate inscriptions see H. Donner and K. Röllig, *Kanaanäische und Aramäische Inschriften* (hereafter *KAI*) (Wiesbaden, 1968–71), nos. 13–16.

⁴ All coins discussed are from the cabinet of the ANS unless otherwise noted.

THE EARLIEST COINAGE ca. 450–435 B.C.

1. *Obv.*: Galley with mast and unfurled triangular sail to l. Border of dots.

Rev.: Persian king standing to r., shooting bow held in l. hand; in incuse. Border of dots.

⌘ Half shekel. Vienna.⁵ (PLATE II)

2. *Obv.*: As 1.

Rev.: Three-tiered podium of the temple of 'Eshmun; in incuse. Border of dots.

⌘ Thirty second shekel. (PLATE II)

The galley appeared on almost all of the coins which Sidon minted before the coming of Alexander the Great in 332 B.C. Typologically, the depiction of the galley's sail is of the utmost importance, for on these earliest coins it is unfurled and triangular in shape. On later issues the sail is partially furled and eventually lost, being replaced by a bank of oars.

The half shekel has an obverse depicting the galley and its sail; the reverse type is the well known engraving of the Persian king shooting the bow. The obverse type is a very early one; however, the reverse type has a number of later parallels in the coin series. The thirty second shekel has the same rendering of the galley on the obverse, but with a hitherto unpublished reverse. This reverse type is unparalleled in later issues; and when coupled with the early obverse type, it definitely antedates the other coins with the king shooting the bow or slaying the lion.

The unique design on the reverse type of the thirty second shekel is a stepped pyramid, resembling a Mesopotamian ziggurat. Fortunately, Dunand's recent excavations have unearthed just such a structure.⁶

⁵ Babelon, *Traité*, vol. 2 pt. 2, pp. 549–50, no. 888, pl. 118.4; see also *BMCPhoenicia*, p.xc, pl. 42,12.

⁶ M. Dunand, "Rapport sur les fouilles de Sidon en 1967–1968," *BMB* 1969, pp. 105–6; see also *Syria* 1926, pp. 7–8, and Dunand, "La défense du front méditerranéen de l'empire Achéménide," *The Role of the Phoenicians in the Interaction of Mediterranean Civilizations*, ed. W. A. Ward (Beirut, 1968), pp. 43–51, especially pp. 43–44 and pl. 13a.

Dunand described it as a podium of ziggurat-like construction from Babylonian times (early- to mid-sixth century B.C.), which followed the plan of the typical Babylonian temple. It was clearly built by the Sidonians, however, and was subsequently altered by them in the Persian period.⁷ This is the podium of the temple of 'Eshmun,⁸ which may have served as the focal point of the Sidonian cult. This coin, and the half shekel with the same obverse type, are the only extant examples of this early Sidonian coinage. Although the coins fit well into a relative chronology, no attempt at an absolute dating is possible. Consequently, it remains difficult to attribute these coins to a specific ruler. Our problem is compounded by the lack of names or abbreviations of names on these coins. From their relative position in the coin series, however, we may postulate that they came from the period ca. 450–435 B.C., and may be associated with either of the last two kings of the dynasty of 'Eshmun'azor—Bôd'ashtart or Yatônmlk (Sidqyatôn).⁹

THE SECOND SIDONIAN SERIES ca. 435–420 B.C.

3. *Obv.*: Galley with mast and partially furled sail to l., over two lines of waves.

Rev.: Chariot pulled by pacing horses to l., with driver holding reins in hands; King of Persia rides in chariot; figure of goat at l. above; in incuse square.

⌘ Double shekel. Paris. (PLATE II)

4. *Obv.*: As 3.

Rev.: King of Persia, wearing crown, with quiver at shoulder, shooting bow to r.; head of goat incuse to r.; head of satyr incuse to l. facing; incuse square.

⌘ Half shekel. Paris. (PLATE II)

⁷ M. Dunand, "La piscine du trône d'Astarté dans le temple d'Echmoun à Sidon," *BMB* 1971, pp. 19–25, especially p. 25, where he calls the battlement "pyramidal;" see also *BMB* 1969, pp. 105–6, and Dunand, "Le temple d'Echmoun à Sidon. *Essai de Chronologie*," *BMB* 1973, pp. 7–25.

⁸ The coin was acquired by the ANS in 1922 from the P. Lederer collection. See Dunand's plates in *BMB* 1965, pls. 1a, 1b.

⁹ *KAI*, nos. 15–6; *PNPPI*, pp. 82–88, 130, 177, 283–85, 328–29.

5. *Obv.*: As 3.

Rev.: King of Persia, wearing crown, with quiver at shoulder, in running (kneeling?) attitude to r.; king is shooting bow held in l. hand to r.; in incuse square.

Ⲗ Sixteenth shekel.

The obverse types of this second series show a development from those of the earliest Sidonian coins. The sail on the galley is partially furled rather than totally unfurled. Furthermore, the galley is depicted as riding the crests of two rows of waves.¹⁰ The reverse type of the double shekel has a chariot pulled by pacing horses, with a driver and a rider in the chariot. A goat is at the top left of the reverse, also. The figure riding in the chariot has been thought to be the King of Persia since the earliest work on these coins was completed.¹¹ More recently, however, Seyrig has argued that this figure is the statue of the *baʿl* of Sidon.¹² He cited evidence to support this claim from the terracottas published by Chéhab, which were found at Kharayeb, near Sidon.¹³ This evidence, however, is inconclusive at best. The standing figure behind the chariot driver is best described as the King of Persia, in a pose identical to that of many glyptic examples of the same scene.¹⁴

¹⁰ As the use of the galley continued at Sidon, the ship ceased to represent the mercantile and naval power of the city alone, and eventually became a symbol for the city itself. It continued to be used in this way well into Roman times.

¹¹ See J.-P. Six, *NC* 1894, pp. 335 ff., for example; Babelon, *Traité*, vol. 2 pt. 2, nos. 889 ff.

¹² H. Seyrig, "Antiquités syriennes: 70. Divinités de Sidon," *Syria* 1959, pp. 52–56. *Baʿl* is often depicted as a rider on a chariot, except that a conical hat and his thunder bolt are missing; see also Moshe Weinfeld, "'Rider of the Clouds' and 'Gatherer of the Clouds,'" *Journal of the Ancient Near Eastern Society of Columbia University* 1973, pp. 421–26.

¹³ M. Chéhab, *Terres cuites de Kharayeb* (*BMB* 1954), p. 4; nos. 2–4; pl. 3.2. This evidence does not prove Seyrig's conclusions, however. The figure in the chariot is in the dress and attitude of the king of Persia as seen on many reliefs and seals. The king is here depicted as the deified suzerain of the city. When the figure of the king of Sidon is added to the reverse type, it is understood that the Sidonian king's role is that of priest of the royal cult and vassal of the deified Persian ruler.

¹⁴ Seyrig, "Divinités," p. 54; on the cult of the Persian king, see G. Widengren, *Die Religionen Irans* (Stuttgart, 1965), pp. 151–55. The Persians worshipped their king

As we shall see below, the King is depicted in his role as suzerain over Sidon and god of the royal cult.

The smaller denominations use the same type on their obverses, but introduce new types with Persian influence on their reverses. On the half shekel, the King of Persia is depicted wearing the royal crown, with a quiver at his shoulder and shooting a bow;¹⁵ the head of a goat and the head of a satyr appear on either side of the king.¹⁶ The fraction

as an image of god; see also Plutarch, *Themistocles*, 27. Thanks are due to Donald S. Whitcomb for this suggestion.

¹⁵ The identification has traditionally been on analogy with the Persian darics and sigloi.

¹⁶ The satyr's head has usually been identified with Bes, who was a deity known from Egyptian folk religion. In contact with the Hellenic world, Bes took on the attributes of Pan, including his satyr-like features, as well as those of the goat. These symbols probably appeared on the coins due to the presence in Sidon of some cult in which Bes, Pan, or some related deity, played a role. Satyr-sileni figures, closely allied with nature and the god of wine and rejuvenation, Dionysus, may have been part of the old Canaanite institution called the *marziḥ*. That people participated in the *marziḥ*'s revelry and party making is well known (see especially text RS 1957.702, published in L. R. Fisher, *The Claremont Ras Shamra Tablets* (Rome, 1971), pp. 37-54, pls. 9-11; C. Virolleaud, "Les nouveaux textes mythologiques et liturgiques de Ras Shamra," *Ugaritica V* (Paris, 1965), pp. 545-51; and J. C. deMoor, "Studies in the New Alphabetic Texts from Ras Shamra, I," *Ugarit-Forschungen* 1969, pp. 167-75). Whether the *marziḥ*'s association with death rites is indicative of a coalescence of it with the worship of 'Eshmun, as healer, and Dionysus-Bes-Pan, is unclear. That 'Eshmun was linked with the fertility deity for animals is well known; and thus, his identification with some of the aspects of Ba'l and the notion of rejuvenation associated with both Ba'l and Dionysus is crystallized. See J. Gray, "The Canaanite God Horon," *Journal of Near Eastern Studies* 1949, pp. 27-34; and RS 24.643 in M. C. Astour, "Some New Divine Names from Ugarit," *JAOS* 1966, pp. 277-84, especially 281-282, notes 46-56. One of Pan's chief duties was to make the flocks fertile, which is parallel with 'Eshmun as fertility god and as shepherd of the flocks (Gray, "Horon," pp. 30-31). The close association of satyrs and sileni with Dionysus leads us to question the use of "Bes" here at all. The figure is merely a satyr associated with the cult tied to the *marziḥ*. We know from the Marseille tariff (*KAI*, pp. 69, line 16) that there were different *marziḥs* of the gods (*kl mrzḥ 'lm*). By the first century B.C., the *marziḥ* at Sidon was a periodic festival, lasting a number of days (*KAI*, p. 60, line 1). See also Fisher, *Claremont Ras Shamra*, pp. 46-47. In any case, the cult at Sidon must have been syncretistic with the cults of Bes, Pan, and/or Dionysus. W. H. Roscher, in his *Ausführliches Lexicon der griechischen und römischen Mythologie* vol. 3 pt. 1 (Leipzig, 1897-1909),

has a similar reverse type, without the goat and satyr's heads, and with the king in a slightly altered position. Although there is a difference in the reverse types, the smaller denominations are clearly linked to the double shekel in time. These coins may have been minted by Yatōnmilk or some unknown king who ruled after him in the mid- to late-fifth century B.C. (ca. 435–420).

BA'LSHALLIM I ca. 420–410 B.C.

6. *Obv.*: Galley, to l., before battlemented wall of city with five towers; galley has row of shields along bulwark; two lions salient addorsed in exergue. Cable border.

Rev.: Chariot drawn by galloping horses to l., driver holds reins; King of Persia rides in chariot; below in incuse, goat running l. looking back over shoulder; in circular incuse. Border of dots.

ⲁ Double shekel. (PLATE II)

7. *Obv.*: As 6.

Rev.: As 6, except 𐤁𐤍 (בש) above chariot.

ⲁ Double shekel.¹⁷ (PLATE II)

As the development of the Sidonian coin types continued, the obverse type underwent a further alteration in which the sails were lost altogether on the galley. The vessel reached another stage in its portrayal with a row of shields along its bulwark and a battering ram affixed to its bow (probably indicating that we are definitely dealing with a warship). The galley appears to be anchored before the city wall of Sidon, which has several battlemented towers. In the exergue are two

illustrates the close relationship Pan has with goats (pp. 1409, 1414, 1465–71) and with Dionysus (3.1, 1439–52). Satyrs and Pan regularly appeared in art together (4, 519–20). Suffice it to say that this figure is a satyr; its attribution as “Bes” only clouds the picture with Egyptian problems which are unwarranted.

¹⁷ The same coin exists with the inscription reversed—𐤁𐤍; this was an engraver's perceptual error. Babelon cites a coin of Imhoof with 𐤁𐤍 on both obverse and reverse, *Traité*, no. 893.

Persian-style lions.¹⁸ The reverse type was also modified. The chariot in which the King of Persia is riding is drawn by galloping rather than pacing horses. The goat, which had been above the chariot, is now shown below it in a running position with its head turned looking over its shoulder. These changes in the obverse and reverse types of the double shekel may best be explained by a change in the moneying authority of the city, which was the king. From the inscriptional data, we may reasonably attribute these coins to king Ba'lsHallim I, who ruled before 'Abd'eshmun, whose reign ended ca. 400 B.C.; thus it is probable that these coins were in circulation in the last two decades of the fifth century B.C.

Ba'lsHallim I is the first Sidonian king to place his initials on his coin types. The letters **בש** (BS) may be read on the reverse type of his double shekel.¹⁹ What prompted this king to place his initials on his coins is not known. Perhaps it was the example of other coinages which were circulating throughout the eastern Mediterranean which employed various systems of identification. Whatever the impetus, we are certain that it was Ba'lsHallim I who began this practice at Sidon. His example was followed by succeeding monarchs.

'ABD'ESHMUN ca. 410–400 B.C.

8. *Obv.*: As 6, except city has four towers.

Rev.: Persian king wearing crown, slaying lion standing before him on hind legs; he seizes it by forelock with l. hand and is about to strike with dagger in r. hand; in incuse square.

⌘ Half shekel. (PLATE II)

¹⁸ See E. F. Schmidt, *Persepolis I: Structures, Reliefs, Inscriptions* (Chicago, 1953), pl. 19, the E. stairway of the Apadama; pl. 115, the Hero's combat with a lion on the S. doorway in the W. wall of the throne room; pl. 146, the E. doorway of the main hall of the Palace of Darius; and pl. 195, the W. doorway of the main hall of the Harem of Xerxes. For a parallel to the reverse with the chariot, see *Tell Halaf III* (note 23 below), pl. 41; the standing figure of the King of Persia may be seen in Schmidt, *Persepolis III* (Chicago, 1970), pls. 41 and 42A.

¹⁹ Babelon, *Traité*, vol. 2 pt. 2, no. 894; *PNPPI*, pp. 100, 288–89, 417. The letters which appear on these coins and those which follow, with the exception of the Mazaeus coinage, are written in a generally conservative Phoenician lapidary script. It has been studied in detail by Peckham, *Late Phoenician Scripts*, chap. 3, "Tyre, Sidon, and Vicinity."

9. *Obv.*: As 6, except city with three towers; one lion in exergue.
Rev.: Persian king wearing crown to r.; standing, shooting bow to r.; bow held in l. hand; incuse head of goat to r.; incuse head of satyr to l.; all in incuse square.
 ⌘ Sixteenth shekel. (PLATE II)
10. *Obv.*: As 6.
Rev.: As 6, except ⌘ (עב) above chariot.
 ⌘ Double shekel.
11. *Obv.*: As 6, except ⌘ (עב) above.
Rev.: As 10.
 ⌘ Double shekel. (PLATE II)
12. *Obv.*: As 6, except city has four towers and ⌘ (עב) above.
Rev.: ⌘ (עב) between legs of Persian king (or hero?) and lion, which king is slaying; lion stands before king on hind legs to l.; king, to r., seizes lion by forelock in l. hand and is about to strike with dagger in r. hand; in incuse square.
 ⌘ Half shekel. London. (PLATE II)

'Abd'eshmun placed the abbreviation of his name, ⌘ (עב),²⁰ on the same coin types used by Ba'lishallim I. Except for these new abbreviations, he did not further alter the types which he inherited from his predecessor.

Issued probably under Ba'lishallim I and 'Abd'eshmun were some fractional denominations (nos. 8 and 9) without nominal abbreviations. The half shekel differs from the double shekel on the obverse by deleting one tower from the representation of the city wall; on the reverse, however, is the Persian king slaying the lion. This is a common scene known from Achaemenid art at Persepolis.²¹ This half shekel was fol-

²⁰ See note 3 above; *PNPPI*, pp. 149–53. This reading, as suggested by Mullen, may have been caused by homoioteleuton and homoiographia when 'mn was read for the intended 'shmn. The latter is a more common name by far, and is well known, from Sidon. Babelon mistakenly attributed these coins to 'Abd'ashtart I (*Traité*, nos. 903 ff.).

²¹ See E. F. Schmidt, *Persepolis I; Persepolis II: Contents of the Treasury and Other Discoveries* (Chicago, 1957), pl. 10: PT4 385, and PT4 784; pl. 11: PT3 383 (seal no. 37), PT4 857, and PT4 704 (seal no. 38).

lowed by another with identical types and the added abbreviation **𐤁𐤍** on the reverse. We have this coin only in an extant example which also has a **𐤁** (**ב**) on the obverse. This is a transitional coin, probably from the early months of the reign of Ba'āna', who followed 'Abd'eshmun, and who used a *beth* to abbreviate his name. The reverse die of the earlier coin of 'Abd'eshmun was still in use and had not yet been changed when Ba'āna' issued his first coins (no. 12).

A sixteenth shekel, with a similar obverse type, but with only three towers and one lion in the exergue, and the reverse depicting the king shooting the bow, with the goat's head and the satyr's head, is probably of Ba'lshallim I; although such fractions may have also been issued by 'Abd'eshmun without his initials.

BA'ANA' ca. 400–386/385 B.C.

13. *Obv.*: As 6.

Rev.: As 6, except **𐤁** (**ב**) above.

⌘ Double shekel. (PLATE III)

14. *Obv.*: As 8.

Rev.: As 12, except **𐤁𐤍** (**ב**) between legs of king (or hero?) and lion.

⌘ Half shekel.

A double shekel is extant with **𐤁** (**ב**) above the chariot of the reverse. A half shekel was struck like the others with these same types, but with **𐤁𐤍** (**ב**) on the reverse, and no letters on the obverse. These abbreviations are clearly representative of the next king on the list, Ba'āna'.²² From the evidence now available, his reign was from ca. 400

²² Mullen has noted that Ba'āna' occurs in 1Kings 4:12, 16, and in Neh. 3:4, besides being known from an unusual coin series which he would like to place in Sidon (see *BMCPHoenicia*, p. cxliv, pl. 42.2). The name is probably a hypocoristicon for a longer name. The coins are clearly, however, not Sidonian. Their types are either Cilician or Cypriot in origin, and are not related to Sidon in any way. This is a different Ba'āna' from the king of Sidon; he is probably from Cyprus, and seems the best candidate for their minting. Babelon attributed these coins to Bôd'ashtart (*Traité*, vol. 2 pt. 2, no. 906).

until 386/385 B.C. It is not surprising that this king did nothing to change the types of the coins, considering the precedents set by his predecessors.

BA'LSHALLIM II 386/385–372 B.C.

15. *Obv.*: As 6.

Rev.: Chariot drawn by galloping horses to l., driver holds reins in; King of Persia rides in chariot; King of Sidon in Egyptian-style garments carrying cultic scepter and votive vase following; below, in incuse, a goat running l. looking back over shoulder; in circular incuse. Border of dots.

⌘ Double shekel. (PLATE III)

16. *Obv.*: ⬥ (𐤇) above; war galley to l., with oars, row of shields along bulwark; small figure as figurehead on bow; ornament over stern; rudder; below, two zig-zag lines of waves. Cable border. Date: 14.

Rev.: Chariot drawn by pacing horses to l.; driver leans forward holding reins; King of Persia in chariot; King of Sidon in Egyptian-style garments carrying cultic scepter and votive vase follows chariot; double exergual line; all in incuse circle. Cable border.

⌘ Double shekel. (PLATE III)

17. *Obv.*: As 16, except no date.

Rev.: As 16, except no King of Sidon.

⌘ Half shekel. (PLATE III)

18. *Obv.*: As 16.

Rev.: Persian king wearing crown, slaying lion standing before him on hind legs; he seizes it by forelock with l. hand and is about to strike with dagger in r. hand; in incuse square.

⌘ Sixteenth shekel. (PLATE III)

19. *Obv.*: As 17.

Rev.: Persian king wearing crown to r.; standing, shooting bow

to r.; bow held in l. hand; incuse head of goat to r.; incuse head of satyr to l.; all in incuse square.

⌘ Thirty second shekel.

20. *Obv.*: As 17.


Rev.: Head of satyr, facing; in incuse. Border of dots.

⌘ Sixty fourth shekel.

The crown prince listed in Dunand's inscription, Ba'lishallim II, became King of Sidon after Ba'āna'. He first issued a transitional double shekel which contained no inscription, but changed the reverse type to include a follower behind the chariot of the Persian king. The "follower" is the king of Sidon in his role as chief priest of the city's cults of Ba'l, 'Ashtart, 'Eshmun, and the royal cult of the Persian king.²³ This is the first representation of a living king on Sidon's coinage, and it must be considered a personal innovation of Ba'lishallim II.²⁴

²³ Seyrig, "Divinités," pp. 55–56; P. Naster, "Le suivant du char royal sur les doubles statères de Sidon," *RBN* 1957, pp. 1–20. See also N. Aimé-Giron, "Un naos phénicien de Sidon," *Bulletin de l'Institut français d'archéologie orientale*, 1933, pp. 31–42; and the review of this article by R. Dussaud, in *Syria* 1933, pp. 335–36, wherein the cultic significance of this personnage was first recognized. The costume and hat of the Sidonian king might better be described as "Syrian;" see M. F. von Oppenheim, *et. al.*, *Tell Halaf III: Die Bildwerke* (Berlin, 1955), pl. 16, 25. See also P. Naster, "Les monnaies phéniciennes: évocation historique d'un grand empire maritime," *Archeologia* (1968), pp. 52–57.

²⁴ Naster, "Doubles statères," p. 11, pls. 2–3, 17–19. H. Seyrig, "Antiquités syriennes: 69. Deux reliquaires," *Syria* 1959, pp. 43–48, pl. 8. The example in Seyrig's pl. 8, shows the storm god—Ba'l—with various iconographic symbols of his cult, including the sun and the so-called "Hathor" moon disk set in the horns of a bull. See also the ancient witness of Sanchuniathon as recorded by Philo Byblius and edited by Eusebius in *Evangelicae Praeparationis*, XV, vol. 1, ed. E. H. Gifford (Oxford, 1903), section 38c, where Astarte, to show her royalty, crowned her head with the head of a bull. Astarte, or 'Ashtart, with her epithet *shem ba'l* ("name of Ba'l") known from Ugaritic of the fourteenth century B.C. and Sidon of the fifth century is semantically equivalent to the epithet *panē ba'l* used of Tanit at Carthage (A. Herdner, *Corpus des tablettes en cuneiformes alphabétiques* (Paris, 1963), no. 16.6.56, and *KAI*, nos. 14, 18), according to F. M. Cross, in his book *Canaanite Myth and Hebrew Epic* (Cambridge, Mass. 1973), p. 30, note 101. In fact, as Cross has shown (pp. 33 ff.), Astarte, 'Anat, and Asherah are all confused at times, as can be seen in the Winchester relief published by I. E. S. Edwards in *Journal of Near*

He also introduced a new obverse type throughout all denominations while he continued changes in the reverse types. Early in his reign (probably in his first year), coins were struck with obverse types lacking the battlemented walls and towers of the city and the lions of Persia. The obverse type bore only the war galley of the Sidonian navy, with shields along the bulwark, a small figurehead on the bow, and an 'Ashtart symbol on the stern with the rudder, oars, waves below, and the letter  (𐤀) above. Three aspects of this new obverse type are of special interest: the war galley is no longer depicted in port, but at sea;²⁵ the standard of 'Ashtart is displayed on the galley's stern;²⁶ and the letter

Eastern Studies 1955, pp. 49–51. The Hathor iconography may be applied to all three of these goddesses (Cross, pp. 34 f.).

²⁵ The ship is the symbol of Sidon and of its powerful grip upon the waters of the eastern Mediterranean. We do not think it too highly speculative to term Ba'lshalim's representation of the ship as propagandistic. The Sidonians had lost face to the Athenian navy in the fifth century, and this may have been part of a propaganda campaign to restore some of that image. A commercially circulating coinage bearing a representation of military power is not to be discounted merely as a monetary token of a fixed value; its psychological values with respect to potential enemies are clear.

²⁶ The symbolism on this standard has been discussed above (n. 24). Astarte is here invoked in her role as protectress of ships at sea. The victory of Ba'l over Yamm (the deified sea) is recalled from the myths of Ugarit in this iconography. See T. H. Gaster, *Thespis* (New York, 1950), pp. 135 ff., wherein Gaster translates Ugaritic texts III AB, B, which contain the account of Ba'l's challenge to the usurper Yamm and his subsequent conquest over him. These mythic elements in the later cults of Sidon are not to be disregarded. Astarte's presence in the Sidonian pantheon and specifically within the temple of 'Eshmun is well documented archaeologically. On later coins, such as those issued under Fennes, 'Abd'ashtart II, 'Abd'ashtart III, and Mazaeus, the Astarte symbol is lost in the inferior die cutting. The symbolism is confused, as the attributes of the three goddesses, Astarte, Asherah, and 'Anat, merged. The confusion is the strongest with Asherah as the conqueror of sea—'aṣirati yammi, "she who treads on the sea"—as known from Ugarit (Cross, *Canaanite Myth*, p. 31). A variant form of the myth of Ba'l and Yamm is that of Astarte and Yamm, from Egypt. See also W. F. Albright, *Yahweh and the Gods of Canaan* (Garden City, N.Y., 1968) pp. 133–34; and S. Moscati, *The World of the Phoenicians* (New York, 1968), pp. 33–34. In the treaty of Esarhaddon of Assyria with Ba'l of Tyre—a treaty dating from the eighth century B.C.—Melqart, 'Eshmun, and 'Ashtart were all called upon in the curse formula to punish any violators by sending storms against ships at sea, tearing up mooringposts, and causing ships to be swamped

𐤁𐤋 (ב) is used as an abbreviation for Ba'lishallim II. This is the same abbreviation which Ba'āna' used on occasion, but the types have been so thoroughly changed that no confusion between the two kings is possible.

The reverse type was also changed. The horses were returned to their pacing attitude, and the goat was lost. The Persian king, the Sidonian king, and the driver appear as before. Ba'lishallim II went to great lengths to issue coins peculiar to himself. Perhaps this was in response to the growing power of Sidon on the Mediterranean, both militarily and commercially. His reign lasted fourteen years, from 386/385 to 372 B.C. His coins are undated except for one late double shekel, with the date of regnal year 14 on the reverse.²⁷

Ba'lishallim II's half shekel had the obverse type of the double shekel, but lacked the king of Sidon on the reverse (probably for lack of space). His sixteenth shekel, thirty second shekel and sixty fourth shekel had the same obverses, with reverse scenes familiar from earlier issues, including the Persian king slaying the lion,²⁸ and the new representation of a satyr's head (facing) on the sixty fourth.

'ABD'ASHTART I 372-359/358 B.C.

21. *Obv.*: War galley to l., with oars, row of shields along bulwark; small figure as figurehead on bow; ornament over stern; rudder; above, dates, 1-13; below, four zig-zag lines of waves. Cable border.

Rev.: As 16, except 𐤁𐤋 (ב) in field above, and no incuse square.

⌘ Double shekel. London. (PLATE III)

by mighty seas (Albright, *Gods of Canaan*, pp. 226-27). The relationships between 'Eshmun and Astarte in regard to ships and the sea are clear; 'Eshmun, 'Ashtart, and Ba'l, the three principle deities of Sidon, were all understood as protectors of ships at sea. The figurehead on the bow of the Sidonian galley is representative of deity also (probably 'Ashtart, as confused with Asherah the warrior). See N. Jidejian, *Sidon Through the Ages* (Beirut, 1971), p. 55; Herodotus 3.37.

²⁷ *BMCPoenicia*, p. 144, no. 25. The coin is late in date with its reverse die being cut similarly to those of 'Abd'ashtart I. The engraving of the dies of this coin shows a decline from the skill exhibited in the earlier coins of Ba'lishallim II.

²⁸ Schmidt, *Persepolis I*, pls. 19, 115, 146, 195.

22. *Obv.* As 21, except dates.

Rev.: As 21, except no King of Sidon to l.

⌘ Half shekel. London. (PLATE III)

23. *Obv.*: As 21, except zig-zag lines of waves.

Rev.: As 22.

⌘ Quarter shekel.

24. *Obv.*: As 23, except border of dots.

Rev.: As 12.

⌘ Sixteenth shekel. (PLATE III)

25. *Obv.*: As 24, except no dates and ⠠ (ב) above galley.

Rev.: As 12, except ⠠ (ב) between legs of king and lion.

⌘ Sixteenth shekel. (PLATE III)

26. *Obv.*: War galley to l., with oars, row of shields along bulwark; ornament over stern; rudder; below, one zig-zag line of waves.

Rev.: King of Persia in kneeling attitude, with bow in l. hand and spear (lance) in r. hand held transversely over shoulder; in incuse square.

⌘ Thirty second shekel.

Ba'lsHallim II was followed in 372 (using the dated double shekel as a guide) by 'Abd'ashtart I, known in the Greek sources as Straton, the Philhellene.²⁹ 'Abd'ashtart made only minor changes in the Sidonian coin types. On the obverse types, the initial of Ba'lsHallim II was replaced by the date—the year of the coin's issue, according to the years of the king's reign. Where the date appeared on the late double shekel of Ba'lsHallim II, 'Abd'ashtart I placed an abbreviation of his name, ⠠ (ב). Other than this, the only change he made was to

²⁹ The name of this king is a common one, especially at Carthage (*PNPPI*, pp. 162–63, 386–87); it means "the servant of 'Ashtart," using the Qal participle of 'bd in the nominal sentence name construction. Note that 'Ashtart has even been identified with Ba'l at Sidon (*Corpus Inscriptionum Semiticarum pars prima: Inscriptiones phoeniciae* (Paris, 1881–) hereafter *CIS*, nos. 3, 18).

increase the number of lines of waves under the galley on the obverse type from two to four on the double shekel.

'Abd'ashtart I's fractional issues included a half shekel, a quarter shekel, a sixteenth shekel and a thirty second shekel. The half shekel lacks the King of Sidon following the chariot; the quarter shekel has only two lines of waves instead of four on the obverse; the sixteenth shekel has the reverse type of the Persian king slaying the lion, with the 𐤎𐤏 inscription between the two figures' legs. An early sixteenth shekel of his reign retained the old obverse of Ba'lshallim II with the 𐤎 (ב), adding the 𐤏 (פ) for 'Abd'ashtart between the lion and the king on the reverse. This issue was quickly replaced with the new king's own obverse type. The thirty second shekel has a new reverse type, seen at Sidon again only on a bronze coin from this same period, which depicts the Persian king with both bow and spear (lance) held over his shoulder.

27. *Obv.*: As 23.

Rev.: As 22, except border of dots; No inscription.

Æ 6.63 g London. (PLATE III)

28. *Obv.*: As 23, except galley to r.

Rev.: As 27, except chariot drawn to r.

Æ 3.98 g (PLATE III)

29. *Obv.*: As 23, except dates 3-10.

Rev.: As 26, except no incuse square.

Æ 3.00 g (PLATE III)

30. *Obv.*: Bearded head of 'Abd'ashtart, to r., wearing crown.

Rev.: Galley, to l., with oars, row of shields along bulwark; rudder; above, dates, 11-12; no waves below.

Æ 3.00 g London. (PLATE IV)


Three groupings of bronze coins were issued by 'Abd'ashtart I, also: a coin weighing 6.63 g with obverse and reverse types similar to those of the silver half and quarter shekels, lacking an inscription on the reverse. A variant of this coin (no. 28) has both types reversed; a small

coin, weighing only 3.00 g with obverse similar to that of the silver quarter shekel, and dated from years 3 to 10, with reverse type showing the Persian king in a kneeling (running?) attitude, holding spear and bow; and a small group of coins of the same weight as the previous group, but with the bearded head of the local king on the obverse and a galley with dates 11 and 12 on the reverse. These last two groups of coins provide an historical annal of the reign of 'Abd'ashtart I, during whose thirteenth year, Sidon participated in a general revolt against Persian hegemony. This is recorded in these dated bronze coins, on which the Persian king's likeness is replaced by that of the local king in 360/359 B.C. This was the precise time when Sidon sheltered the Egyptian king, Tachos, until his unconditional surrender to the Persian armies.³⁰

'Abd'ashtart I is remembered as a wealthy, powerful monarch. Among other things, he received an Athenian embassy on its way to the Persian court and consequently was "granted the honor of proxenia by the Athenians."³¹ He was clearly pro-Greek in his politics, and his eventual participation in a revolt was not surprising. The political use of his coinage as a vehicle for propagandizing led to the loss of Sidon's minting privileges for several years.

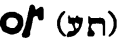
TENNES 355/354–345/354 B.C.

31. *Obv.*: As 21, except above, dates 1–5.

Rev.:  (𐤓𐤍) in field above; chariot drawn by pacing horses to l., driver leans forward holding reins; King of Persia in chariot; King of Sidon in Asian-style costume carrying cultic scepter and votive vase following; double exergual line; incuse circle. Border of dots.

Ⓐ Double shekel. (PLATE IV)

32. *Obv.*: War galley to l., with oars, row of shields along bulwark; rudder; above, dates; two zig-zag lines of waves below. Cable border.

Rev.: As 12, except  (𐤓𐤍) between legs of king and lion.

Ⓐ Sixteenth shekel. (PLATE IV)

³⁰ W. Judeich, *Kleinasiatische Studien* (Marburg, 1892), pp. 166, 209.

³¹ See *CIS* no. 114.

Persian military forces probably occupied Sidon for a few years following 'Abd'ashtart I's participation in the revolt which began in about 360 B.C. When the Persians felt secure enough to allow a new king to occupy Sidon's throne, the historical and numismatic evidence indicate that a man named Tennes was chosen.³² His coinage is dated to a five year period, from 355/354 to 351 B.C. Hill saw only coins dated to a four year period; however, the collection of the ANS contains a double shekel of year five. The years 358 to 355 B.C. were an inter-regnum when no Sidonian kings ruled.

The reinstitution of the kingship occurred in 355/354 B.C., which is a period well known from the classical sources.³³ Tennes resumed the silver coinage of the city with the blessing of the Persian rulers, using the same types which 'Abd'ashtart I had used, but he issued no bronze coins.³⁴ Two denominations are extant from the reign of Tennes, the double shekel and the sixteenth shekel. Probably he also issued half and quarter shekels, although none are presently known. His coins are identical to those of his predecessor, except for the new abbreviation, **or** (𐤌𐤓), the new dates, and the border decoration. A minor development is a change in the garment worn by the King of Sidon as he follows the chariot on the reverse of the double shekel. The Egyptian-style costume has been replaced by a purely Asian one; Sidon's friendship with Egypt—one of the most rebellious corners of the Persian realm—

³² Babelon was undoubtedly correct in attributing the coins with the abbreviation **or** to this new king. Although we do not have the name in Phoenician, the abbreviation is entirely possible and may correspond to a hypocoristicon of a verbal sentence name including the elements Tanit plus one of any number of verbs or nouns formed from them, such as 'nn, 'ms, 'ms, 'z, 'zr, etc. Forms of these verbs, and others, would be possible, each leading to an abbreviation **or** in Phoenician and the form "Tennes" in the Greek. Thanks are due to F. M. Cross for this suggestion.

³³ Diodorus, XV.40 ff. Mentioned in the Oxyrhynchus Papyri is a Sidonian named Akton, who is thought by some to have been a king of Sidon. See also B. P. Grenfell and A. S. Hunt, eds., *The Oxyrhynchus Papyri*, vol. 5 (London, 1908), pp. 149, 214, P. Oxy. 842, col. iii, line 26. The reading of such a person as king is most unclear; such a person, if he existed, appears to have been a leader of the fleet if anything at all. The word "king" is totally lacking, and therefore, the inclusion of this name on the king list is inadvisable.

³⁴ See R. N. Frye, *The Heritage of Persia* (Cleveland, 1963), p. 119.

was clearly under scrutiny. The quality of the workmanship in the die cutting is inferior to earlier coin series, also. The lack of definition and the poor execution of minute details which once were perfectly clear is proof of this fact: the standard of 'Ashtart above the stern of the galley is a good example, for the moon and bull's horns have degenerated into a crude starlike design under Tennes. Less detail appears on the sixteenth shekel's types, also.

Tennes stopped issuing coins in 351 B.C., when he joined a revolt which had originated in Cyprus and Egypt. The Persian king, Artaxerxes III,³⁵ tried unsuccessfully to put down this rebellion with a great military campaign in 351/350 B.C.³⁶ Sidon fell either during this first campaign, or just before the second campaign in 345/344 which finally crushed all Egyptian resistance. The second option is the more probable of the two. It was the failure of Artaxerxes' first campaign against Egypt which gave Tennes the impulse to join the fray, leading Palestine along with him.³⁷

It is not unusual that no coins were minted at Sidon during the revolt. The magnitude of the war was great, and a number of cities in the Levant suffered total devastation. Indeed by 345 B.C., Hazor, Megiddo, 'Atlit, Lachish, and Jericho had been destroyed.³⁸ The fate of Sidon—betrayed by its own king into the Persians' hands—is well documented in Diodorus. The Sidonians were particularly hateful toward the Persians, since Sidon was a place where Persian officials lived. These people may have been connected with the fleet. Whatever their function, Diodorus (XVI.41.2 ff.) tells us that they misbehaved, angering the Sidonians and further straining relations between the conqueror and the conquered. Behind the example of Sidon, all Phoenicia rebelled.

³⁵ See R. Ghirshman, *Iran* (Baltimore, 1954), p. 201.

³⁶ We agree with F. K. Keinitz, in his *Die politische Geschichte Ägyptens vom 7. bis 4. Jahrhundert vor der Zeitwende* (Berlin, 1953); see J. Vandier's review of Keinitz's arguments in *Bibliotheca Orientalis* 1954, pp. 189–90.

³⁷ D. Barag, "The Effects of the Tennes Rebellion on Palestine," *BASOR* 1966, p. 7. See also Isocrates, *To Philip*, 101–2, in which he urged Philip (in 346 B.C.) to make war on Persia since its satrapies in Asia were already in revolt. Isocrates wrote that Cilicia, Phoenicia, and Cyprus revolted only after Artaxerxes III failed to subdue Egypt in 351/350 B.C.

³⁸ Barag, "Tennes Rebellion," p. 12 note 32.

The entire Sidonian economy was converted into a war machine as preparations were made to meet the Persians' next foray into the Phoenician heartland.³⁹ When finally Artaxerxes III had again outfitted his mercenary army, he marched on Egypt via Sidon, with forces under Mazaeus, the Cilician satrap, and Euagoras II, a deposed monarch from Salamis. There followed the defection of Tennes, resulting in his own death and the deaths of 40,000 Sidonians who died in their own burning of the city.⁴⁰ These events occurred in 348/347 B.C.⁴¹

'ABD'ASHTART II 345-343/342 B.C.

33. *Obv.*: As 21, except dates 1-3.

Rev.: As 31, except $\circ\circ$ (פפ) in field above.

⌘ Double shekel. (PLATE IV, 33a, b)

34. *Obv.*: War galley to l., with oars, row of shields along bulwark; rudder; above, dates; below, two zig-zag lines of waves. Border of dots.

Rev : As 12, except $\circ\circ$ (פפ) between legs of king and lion.

⌘ Sixteenth shekel. (PLATE IV)

Babelon has conjectured that the *ἡγεμόνια* which Euagoras II received from Artaxerxes III for his services rendered in suppressing this revolt was the governorship of Sidon. He has argued this conclusion from the coins, since Diodorus merely says that this hegemony was in Asia.⁴² Babelon believed that this series of coins bearing the abbreviation $\circ\circ$ (פפ) was struck under the authority of Euagoras II (עגורא) in

³⁹ Diodorus, XVI.41.4-6.

⁴⁰ Diodorus, XVI.45.4-6.

⁴¹ Judeich, *Kleinasiatische Studien*, p. 175.

⁴² Diodorus, XVI.46.2; Peckham, *Late Phoenician Scripts*, p. 73; *BMCCyprus*, pp. cix-x, in which Hill expresses doubts concerning Euagoras's "satrap" coinage in Cyprus. Imhoof-Blumer also argued against such a narrow attribution in his *Kleinasiatische Münzen*, vol. 2 (Vienna, 1901-2), pp. 519-20. See also T. Reinach and O. Hamdy Bey, *Une nécropole royale à Sidon* (Paris, 1892-96) p. 391 note 3. Reinach's general assertions concerning the coinage of Sidon are wrong, although his suspicions concerning Euagoras are well founded.

Babelon's theoretical Phoenician form).⁴³ Since these coins are dated 1 to 3, it was further postulated that Euagoras II ruled Sidon from 345 to 342 B.C., with an interregnum from 348/347 to 345.

The abbreviation which appears on the reverse types of the double and sixteenth shekels cannot refer to Euagoras II. The Phoenician spelling offered by Babelon עגורא is impossible, because two 'ayins cannot follow each other. 'Ayin was still pronounced in Phoenicia during this period, making the repetition of two laryngeal stops at the beginning of a word impossible to pronounce.⁴⁴ Given the Greek spelling of Euagoras, we would expect the Phoenician transcription to be עגורא or the like. The *waw* is necessary following the 'ayin.⁴⁵ Needless to say, עע (עע) is not an acceptable abbreviation for Euagoras according to the accepted conventions for abbreviating names which were used by the Phoenicians.⁴⁶ The עע (עע) must refer to someone else.

If Euagoras II of Salamis was given hegemony over Sidon, he did not strike any coins during this brief period. He may have ruled; but his failure to administer control of these areas as an outsider led to his downfall and eventual death.⁴⁷ If he ruled in place of a Persian military

⁴³ Babelon, *Traité*, vol. 2 pt. 2, pp. 589–90. Hill accepted this notion (*BMCPheonicia*, p. xcvi). The name is from good Greek, meaning "good market;" see A. Fick, *Die griechischen Personennamen* (Göttingen, 1874), pp. 31, 97.

⁴⁴ Z. S. Harris, *A Grammar of the Phoenician Language*. American Oriental Series vol. 8. (New Haven, 1936), pp. 16, 27. It was not until Neo-Punic times that 'ayin lost its pronunciation as a laryngeal stop. Note the Latin attempt to render the earlier Punic name עזרבעל as *Hasdrubal*.

⁴⁵ Note the spelling of the name *Severus*, טארא (Harris, *Grammar*, 19); or *Faustus*, פאוסטא (Harris, *Grammar*, 16). Perhaps אגורא was the proper Phoenician form of the name. The ending א— stood for -ος, -ας, or -ης (Johannes Friedrich, "Griechisches und römisches in phönizischen und punischen Gewande," *Festschrift Otto Eissfeldt zum 60. Geburtstage*, ed. J. Fück (Halle, 1947), p. 110).

⁴⁶ *PNPPI*, pp. 235–37. One- and two-letter abbreviations are derived in three ways: (1) the first two letters of the name; (2) the first letters of the two components of a compound name; and (3) the first and last letter of the name. Such conventions rule out עע for Euagoras.

⁴⁷ Diodorus, XVI.46.3. This must have been after 346 according to Judeich, *Kleinasiatische Studien*, pp. 135–36. Indeed, the use of the word ἡγεμονία in classical

government, or if some general actually was in command, the period in question was from 348/347 to 345 B.C. In that year the Persians finally restored the Sidonian throne to a local ruler, selected by the Persians, whose name may be abbreviated **○○** (פפ). We believe this to have been another ruler named 'Abd'ashtart, who ruled for only three years (345–343/342). The abbreviation is a perfectly good one for this name, and it differentiates this ruler from 'Abd'ashtart I who used **פפ** on his coins.⁴⁸ When yet another 'Abd'ashtart (III) ascended to the throne in 342, the old abbreviation was used again; there were slight differences in the coin types.

Only two denominations now are known which were minted by 'Abd'ashtart II: the double shekel and the sixteenth shekel. The types are identical with those of Tennes, with the usual exceptions of the dates, abbreviations, and borders.

'ABD'ASHTART III 342/341–332 B.C.

35. *Obv.*: As 21, except dates 1–10.

Rev.: As 31, except **פפ** (פפ) in field above.

⌘ Double shekel. (PLATE IV)

36. *Obv.*: As 23.

Rev.: **פפ** (פפ) in field above; chariot drawn by pacing horses to l., with driver leaning forward holding reins; King of Persia in chariot; in incuse circle. Border of dots.

⌘ Half shekel. (PLATE IV)

37. *Obv.*: As 21, except above, dates 16–21 and 1–4;

Rev.: As 31, except **פפ** (פפ) in field above.

⌘ Double shekel. (PLATE IV)

and patristic Greek does not imply the authority to strike coins; it is merely pre-eminence or command during war.

⁴⁸ The abbreviation is composed of the first letters of the two elements of the compound name.

38. *Obv.*: War galley to l., with oars, row of shields along bulwark; small figure as figurehead on bow; ornament over stern; rudder; above, dates; below, two zig-zag lines of waves. Border of dots.

Rev.: As 12, except 𐤋 (𐤌) between legs of king and lion.

Ⲗ Sixteenth shekel. (PLATE IV)

'Abd'ashtart II was followed in 342/341 B.C. by 'Abd'ashtart III. His double shekels bear dates from 1 to 10, and the new abbreviation 𐤏𐤐 for 𐤐𐤐. His half shekels are identical to the double shekels, but lack the king's likeness following the chariot on the reverse.

It was 'Abd'ashtart III who was ruling Sidon when Alexander III conquered the Levant in 332 B.C. Alexander replaced him with Abdalonymus even though he capitulated without a fight.⁴⁹ He was called Straton in the Greek sources without reference to which ruler of that name he was. It has been assumed that he was Straton II because no mention was made in the classical sources (see Diodorus, XVII.46.6–47.1) of two Stratons ruling successively in this time period.⁵⁰ If our theory is correct, the kings maintained their differentiation on their coinage by using different abbreviations for the same name; both abbreviations are acceptable within the rules of Phoenician grammar.

At the same time, presumably, that 'Abd'ashtart III was striking coins at Sidon, so too was Mazaeus, the satrap of Cilicia. Mazaeus's coins, clearly struck from dies cut by the same craftsmen who made the dies for the local kings' coins, bear the satrap's name on the reverse, 𐤌𐤕𐤌𐤕 (𐤌𐤕𐤌𐤕), in Aramaic rather than Phoenician. Mazaeus also used a different dating system from that of the local kings. His coins seem to have been dated according to the regnal years of the Persian kings, preceding the numbers with an Aramaic 𐤁 (𐤁), which is the abbreviation for 𐤁𐤓𐤕𐤕, "in the year"⁵¹

⁴⁹ See Peckham, *Late Phoenician Scripts*, pp. 72–75; Justln, XI.10.8–11; Curtius, IV.1.15–26; and A. T. Olmstead, *History of the Persian Empire* (Chicago, 1948), p. 506.

⁵⁰ Diodorus confuses Sidon with Tyre at this point.

⁵¹ Babelon, *Traité*, vol. 2 pt. 2, p. 582; J. Halevy, *Mélanges d'épigraphie et d'archéologie sémitiques* (Paris, 1874), pp. 64 ff. On the Aramaic script used on this coin,

Mazaeus's coins are extant in the double shekel and the sixteenth shekel. Their types are identical with those of 'Abd'ashtart III, excepting the Aramaic name and the unusual dating system.⁵² A half shekel with a "Phoenician" *mem* (𐤌) is listed in the catalogue of the Fitzwilliam Museum, Cambridge. It is supposedly on the obverse rather than on the usual reverse. However, the coin is not an issue of Mazaeus at all.⁵³

Unfortunately, the proper placement of the Mazaeus coinage within the Sidonian series is still problematical. Hill reviewed the conflicting positions of Rouvier and Babelon,⁵⁴ arguing that the coins were issued contemporaneously with those of 'Abd'ashtart III. He views them as pay for the soldiers and sailors of the Sidonian fleet as preparations were made to do battle with the warring Macedonians.⁵⁵ This is a possibility, but we cannot be certain because the historical sources are regrettably mute on this subject. To be sure, the types issued under Mazaeus were the royal Sidonian ones, and not those which he used in Cilicia. The style of the coins indicate that the same workshops which were producing them also produced 'Abd'ashtart III's coins. Of course there are no die links between the issues; but the engraving is definitely from the same hand.⁵⁶ Wear on these dies is not great; it is, however, extensive

see J. Naveh, *The Development of the Aramaic Script*. Proceedings of the Israel Academy of Sciences and Humanities, vol. 5, no. 1 (Jerusalem, 1970), pp. 51-54, pl. 11.1-2. The script is typically conservative, as is the script on all of these coins, generally speaking. (The exception to this rule is the *shin* on the Phoenician coins, which is late compared to the other letter forms).

⁵² The abbreviation is 𐤌𐤕 (𐤌𐤕).

⁵³ This coin is No. 9496 of the McClean Collection of the Fitzwilliam Museum. See S. W. Grose, *Catalogue of the McClean Collection of Greek Coins*, III (Cambridge, 1929), p. 372, no. 9496, pl. 351.6. The inscription is better read 𐤌, than 𐤌; it is a coin of Ba'lsallim II.

⁵⁴ *BMCPHoenicia*, pp. xcvi-ix; Babelon, *Traité*, vol. 2 pt. 2, nos. 934 ff. A critique of Hill's proposal is in Peckham, *Late Phoenician Scripts*, p. 74, note 18. See also Diodorus, XVII.5.3-6.

⁵⁵ *BMCPHoenicia*, p. xcvi. See Gerhard Hern, *The Phoenicians: The Purple Empire of the Ancient World*, tran. C. Hilher (London, 1975), pp. 159-60.

⁵⁶ A study of these coins to find die links resulted merely in links between coins of the same ruler and of the same year. New dies were made in each year.

on the obverse dies of the coins of 'Abd'ashtart II. These were used far beyond their normal life.⁵⁷ Perhaps this is an indication that there were few skilled craftsmen to make the coins and the dies needed to strike them just after Sidon's destruction in 348/347 B.C. Only raw speculation may provide answers to the problems raised by the Mazaeus coinage at this time.

The next coins to be struck by the Sidonian mint were issued under the authority of Alexander the Great, after 'Abd'ashtart III's surrender of the city.⁵⁸

⁵⁷ See the illustrated examples of coin no. 33; the obverse dies are very badly worn, showing die breaks and general disintegration.

⁵⁸ On these Alexandrine issues, see E. T. Newell, *The Dated Alexander Coinage of Sidon and Ake* (New Haven, 1916), pp. 21 ff. A review of this book was published by Hill in *NC*, 1916, pp. 407-9. See also Arrian's *Anabasis*, II.15.6, where the Sidonian's loathsome feelings for Persia and Darius were discussed; and I. L. Merker, "Notes on Abdalonymos and the Dated Alexander Coinage of Sidon and Ake," *ANSMN* 1964, pp. 13-20.

THE DELTA HOARD OF PTOLEMAIC “ALEXANDERS,” 1896

(PLATES V-VIII)

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In 1898, E. D. G. Dutilh wrote about a hoard of Ptolemy Soter's satrapal silver recently discovered in Egypt,¹ and soon afterward, Babelon² and Mowat³ added a few passing references to it. The two later reports, apparently written independently of Dutilh's as well as of each other, exhibit minor discrepancies, but all three contain much in common and without doubt refer to the same find.

While the facts about the original discovery remain blurred, it is possible to reconstruct the main outline of the hoard with the aid of these published accounts. We learn that the deposit came to light in the Nile Delta⁴ some time in the latter part of 1896 and that it was of

¹ E. D. G. Dutilh, "Monnaies de Side et d'Égypte," *Journal International d'archéologie Numismatique* (hereafter *JIAN*) 1898, pp. 148–56; the find is described on pp. 148, 153–56.

² E. Babelon, *Traité des monnaies grecques et romaines* vol. 1 pt. 1 (Paris, 1901), p. 23.

³ R. Mowat, "D'une collection générale permanente de monnaies contremarquées," *RN* 1906, pp. 262–66; for the find, see pp. 293–94, no. 43.




⁴ Attempts at a more precise localization remain inconclusive. Mowat states that the hoard was discovered in the vicinity of Demanhur, a town in the Delta. But as no one else confirms his report, one wonders whether Mowat, writing as he did in 1905/6, did not actually confound the find spot with that of the great hoard of Alexanders at Demanhur (*Inventory of Greek Coin Hoards*, hereafter *IGCH*, 1664) unearthed at this time. The attribution to Semenood is, on the other hand, demonstrably erroneous and seems to have resulted from a series of misassociations begun in the first edition of S. P. Noe's *A Bibliography of Greek Coin Hoards* (New York, 1925), pp. 186–87, and carried over to the second, 1937, edition of the same work. The name of the Egyptian town had originally appeared in G. Botti's "La deuxième trouvaille de Samanoud" (*Bulletin de la Société Archéologique* no. 1 [1898] pp. 25–38) which described a find of raw silver and other objects. Mistakenly and without mentioning its title, Noe included this article as a reference to a different

considerable size with estimates ranging from well over 1000 pieces (Dutilh) to 2000 or more (Babelon, Mowat). Concerning its general contents, Mowat describes a single piece—a tetradrachm of the Alexander-in-elephant-scalp/Palladion type—and the other two writers imply that the hoard contained no other variety.

But for the actual varieties it contained, we must leave the brief statements of Babelon and Mowat and turn to Dutilh's extensive account of the find. The latter took time to examine and lists some 200 hoard tetradrachms of the Vinga Collection in Alexandria, and it is from his account that the true profile of the hoard finally emerges.⁵ The value of that writer's testimony is further enhanced by his subsequent viewing of between 500 and 600 additional hoard pieces in the Cairo coin market which in his estimation contained substantially the same control varieties. As Dutilh's article went to press in the end of 1897 his account, besides being the most complete, is also the earliest.

From Dutilh's list we learn that the hoard contained tetradrachms struck exclusively in the reduced weight and that the varieties present were predominantly of the kind associated with the Helmet symbol,

hoard, discovered at the same time as the Delta find and first published in the same article (Dutilh's) with the Delta find, and then proceeded to enter both hoards under "Semenood." Subsequently, he removed the reference to Botti (that find became a separate item, Noe 956), but the place name stuck to the two other entries (Noe 954, the Delta hoard; and 955). It was in this roundabout way that our Delta find became known by the wrong name.

⁵ Dutilh's descriptions (*JIAN* 1898, pp. 154–55) are sometimes unclear and inconsistent, especially with respect to the location of the various controls in the field. Generally these difficulties are minor and easily resolved, but there are two cases where the description must be altogether erroneous. In the first, Dutilh (p. 154) describes one tetradrachm as being marked with KO in the left field of the reverse, but the description is wrong. Dutilh apparently made a particular mention of this piece because it displayed a letter M scratched above the Palladion's shield. But the variety is almost certainly the same as that marked  –Helmet (with both adjuncts in the right field) of which the Vinga lot contained 38 examples (Dutilh, p. 154). The other enigmatic variety appears in three pieces which, according to Dutilh (p. 155), had the monogram  under the shield. This control is unknown and most probably represents the combination  awkwardly engraved on the die and situated in its normal position between the goddess's advancing leg and the emblematic Eagle.

the remainder displaying plain-letter controls. Also, the tetradrachms formed a continuous and consecutive aggregate extending from practically the beginning of the reduced-weight series down to a late stage of it at which point there is a clear break. Moreover, Dutilh's account demonstrates by negative inference that the group of light tetradrachms issued contemporaneously with gold staters, absent without exception from the Vinga coins, came after the hoard's burial and therefore formed the final section of the satrapal coinage.⁶

The list also shows that the Vinga coins contained countermarked pieces, as Dutilh makes occasional (though not systematic) mention of them; one piece subsequently offered for sale (Hoffman collection, see p. 42 below) belongs to this category. That some hoard coins were heavily countermarked is indicated by Mowat's publication of one such specimen (Mowat Collection, see p. 42 below).

Unfortunately, Dutilh gives no information about the condition of the coins, but an idea on this matter can be formed from the two pieces just mentioned: the first (Hoffman) exhibits a fair amount of wear—though no part of it is worn smooth—while the other (Mowat) shows practically no sign of circulation. It can be shown (Cat. 3–14, 136–48 below) that these pieces represent early and late emissions, respectively, which gives a tentative idea of the range of wear due to circulation. So much one learns about the coins and their format from Dutilh's account.

Recently, this writer and others have traced to the Delta hoard a number of lots now in museums in Paris, Vienna, London and New York or described in literature—Weber Collection—which in their aggregate provide an opportunity to reexamine this important find by looking at the coins themselves.

What is known about the source of these tetradrachms ranges from explicit attribution of the hoard to bare statements about the date and manner of purchase. At the one extreme fall the Vienna coins described in the museum's registers as "Part of an Egyptian find—Noe's Semenood hoard." Then come the New York and London coins⁷

⁶ For these silver and gold coinages, see p. 47 and note 13, below.

⁷ During a visit to the British Museum, apparently in the teens of this century, E. T. Newell made a list of the tetradrachms in London which, on the basis of available information, he labeled alternatively, "From a recent find," and "Sivadjian Hoard 1897." While Newell did not associate the coins (13 in all) with the Delta hoard, the

for which the statements of attribution are less categorical; and, finally, the Paris and Weber pieces where the available facts concern details of purchase only.

While information on attribution is no longer verifiable and must be taken at face value, that relating to the circumstances of acquisition needs some comment, as it is undoubtedly factually correct and provides, moreover, a unifying theme for most of the material brought together here. With the exception of the one in New York, the lots were acquired shortly after the hoard's discovery, in 1897 or at the latest in 1898, and it is also important to note that they were purchased in parcels.⁸ Furthermore, since there is no record of a find, large or small, of reduced-weight Palladion tetradrachms for the interval between the Kuft hoard of about 1875 (*IGCH* 1670) and that discovered at Toukh-el-Garmous in 1905/6 (*IGCH* 1679), and since the former hoard must be excluded as a possible source of our lots for a variety of reasons,⁹ the only remaining candidate is the great Delta find. Thus, even when more explicit in-

connection would seem to follow, and has actually been made by the editors of *IGCH* at 1671—I have followed their example.

⁸ While it cannot be definitely proved that the Weber tetradrachms came from a single lot, their acquisition in the same place and year (Cairo, 1898) and their uniform appearance, make it likely that they did. (Weber 8219 in Forrer's publication—marked $\text{H} \text{K}$ and weighing 15.68 g—was bought in Alexandria in 1897, and quite likely also came from the hoard, but since it was acquired singly, it has been omitted from our catalogue.) Dutilh writes in his "Historique des collections numismatiques du Musée gréco-romain d'Alexandrie," *JIAN* 1900, pp. 5, 6 that on May 8, 1898, the Museum received an anonymous gift of four tetradrachms which he describes as "très beaux," and that on September 17 of 1898 (or 1897?) it purchased another eleven pieces of "conservation parfaite." These specimens contain varieties similar to those in the Delta hoard (they correspond to Cat. 3–21, 82–106, 109–20, 131–33 and 136–48 and may therefore have come thence, but as I have adhered to the practice of including only material actually handled (the coins themselves, photographs, or casts), the 15 Alexandria coins have been left out.

⁹ One reason is that the Kuft hoard was composed mostly of *foreign* "Alexanders" This indicates that had any of our lots derived thence, their composition would in all probability have been much different. Another reason is the distinctive fabric of the Kuft coins which, according to Newell's records in the ANS (based on information received directly from S. Davidson, the original owner of a large lot of Kuft tetradrachms), were without exception countermarked. Once again our coins are cleared, as the lots comprised primarily unstamped pieces. For further comments on Kuft, see p. 51 and note 23, below.

formation is lacking—or despite such information—a date of acquisition reasonably close to 1896 taken together with proper indications of fabric would seem to provide sufficient proof of origin. About the New York coins whose disposition is first recorded several years after that date, one must rely on the owner's (Newell's) knowledge that they did come from the hoard, as well as on inferences drawn from general appearance and format of controls.¹⁰

This writer is aware of the risks involved in the reassembly of hoard material 80 years after the original discovery, but is of the opinion that the lots considered here are sufficiently uniform in their testimony as to dispel serious reservations about their single origin. In none of the lots do the control varieties exceed the general range set by Dutilh's list, and the tetradrachms themselves bear occasional countermarks; also, the coins taken as a group fall within the limits of circulation wear previously specified, though the majority are otherwise of superior condition.

The dispersal of the Delta hoard must have enriched many a coin collection, and had this search been extended, additional material would no doubt have been discovered. The lots catalogued here form a group of 148 tetradrachms, a total well below that of the 200 Vinga pieces, but, as will be seen, they bring sufficient evidence for supplementing, as well as clarifying, Dutilh's record.

I am indebted to several curators of coin cabinets for making available relevant records. Special thanks are due to: H. Nicolet, Paris; G. Dembski, Vienna; M. Price, London; and M. Thompson and N. Waggoner, New York.

¹⁰ Newell states in a set of notes written between 1930 and 1937 (at the ANS) that he had "secured through the Parisian antique dealer Mihran Sivadjan ninety-two pieces said to have come from the [Delta] find." Elsewhere in the same notes he writes that this large parcel was acquired in 1909, that is, considerably later than the hoard's actual discovery. It is not clear how such a large group of coins could have been preserved intact for so many years, but the coins did remain together and their uniform appearance (a shiny surface with a yellow-brownish coloration) demonstrates their common origin. Moreover, Sivadjan is known to have kept coins from the Delta hoard in his stock as early as 1897 when he sold 13 specimens to the British Museum (see note 7 above), and it may be that the dealer's supply did not run out for some time. The condition of the New York coins and the range of the emissions, similar to those in the other lots, also speak in favor of their attribution to the Delta find.

The catalogue gives the present disposition of all coins listed, implicitly for the New York pieces, and in abbreviated form after the weights for the rest. A key to the abbreviations and other summary information about the list are provided below.

- L — London, British Museum (Svoronos, *Ta nomismata tou kratous ton Ptolemaion* [Athens, 1904–8, hereafter *Ptolemies*] Pt. 2, catalogue listings; Dattari, *JIAN* 1905, pl. II, 13, 14; *IGCH* 1671). Acquired from M. Sivadjian, Paris, June 1897—13 pieces.
- P — Paris, Bibliothèque Nationale (inventory nos. M.2144–64, 8 A–U; with errors, these numbers are given in the entries of Svoronos, *Ptolemies* Pt. 2; E. Babelon, “Alexandre ou l’Afrique? Étude d’iconographie d’après les médailles et les pierres gravées,” *Aréthuse* 1924, pl. XVIII, 10, 11; P. Godefroy, “Tétradrachmes lagides au revers d’Athéna Promachos,” *RN* 1936, pl. V, 4–7. Acquired March 1898—21 pieces.
- V — Vienna, Kunsthistorisches Museum (nos. 29.746–60). Acquired from Brüder Egger and F. Walla, Vienna, 1897—15 pieces.
- Hf — H. Hoffmann collection (Svoronos, *Ptolemies* Pt. 2, no. 146k). Rollin-Feuardent sale, May 2–11, 1898, no. 817—1 piece.
- Mw — R. Mowat collection, Paris (R. Mowat, “Collection de monnaies contremarquées,” *RN* 1906, pp. 293–94, no. 43, pl. XI, 28—1 piece.
- Wb — H. Weber collection (L. Forrer, *The Weber Collection* vol. 3 pt. 2 (London, 1929), nos. 8216 (London), 8218, 8220–22, 8224, 8226–28; *SNG Lockett*, nos. 3387, 3389, 3392. Sales, Glendining, Feb. 21–23, 1961, nos. 2774, 2776, 2779; Münzhandlung Basel, Oct. 1, 1935, nos. 926, 933–35, 938; Sotheby, Nov. 20, 1968, no. 119). Cairo, 1898—9 pieces.
- New York, American Numismatic Society (notes by E. T. Newell, ANS). M. Sivadjian, Paris, 1909—88 (originally 92) pieces.
- Vinga Collection, Alexandria (*JIAN* 1898, pp. 153–55).—200 pieces.
- As all tetradrachms are of the same type (Alexander head in elephant’s scalp/Striding archaistic Palladion) and bear the same legend (ΑΛΞΑΝΔΡΟΥ), their description in the catalogue is confined to indicating the control combinations.

Weights printed in italics refer to countermarked specimens, while those followed by an asterisk (*) refer to coins illustrated in the plates. The condition of the coins is expressed as WO (brillant) to W3 (well circulated).

No.	Controls	Vinga (no. spec.)	Style	Weight (grams)	Condition	No. spec.
REGULAR ISSUE						
"Plain" Series						
1-2	⌘	-	A1	15.62*, 15.48	W3-W2	2
3-14	⌘ A	14	A1	15.70(Wb), 15.64, 15.62*, 15.62, 15.61(P), 15.61, 15.57(L), 15.56(P), 15.55(V), 15.54, 13.87 (damaged) —(Hf)	W3-W2	12
15-21	⌘	8	A2	15.84, 15.68(P)*, 15.65(Wb), 15.65, 15.59, 15.56, 15.30(V)	W2-W1	7
22	ΔI ⌘	-	A3(b)	15.67(P)*	W0	1
Helmet Series						
23-36	⌘ Helmet	18	A2	15.78(Wb), 15.66*, 15.66, 15.65, 15.63, 15.63(P), 15.62, 15.62(P), 15.61(P), 15.57, 15.57, 15.55(V), 15.53, 15.4(V)	W3-W1	14
37-46	⌘P Helmet	16	A2	15.70, 15.63, 15.62, 15.60(V)*, 15.58(P), 15.57, 15.53, 15.53, 15.43, 15.34(L)	W3-W2	10
47-50	⌘P Helmet and Star 1	1	A2	15.65(V)*, 15.65(P), 15.41, 12.88 (damaged)	W3-W1	4
51-54	⌘ Helmet	2	A2	15.62 (P)*, 15.61 (Wb), 15.53, 15.42	W3-W1	4

No.	Controls	Vinga (no. spec.)	Style	Weight (grams)	Condition	No. spec.
55-81	Α	38	A2	15.74, 15.69, 15.69, 15.68, 15.68(Wb), 15.66(P), 15.66(L), 15.65*, 15.63, 15.61, 15.61(L), 15.44	W3-W1	27
			A3(a)	15.76, 15.73, 15.72, 15.71, 15.70, 15.70(V), 15.68, 15.68, 15.65, 15.64, 15.62, 15.60, 15.55, 15.55, 15.53	W3-W1	
82-94	κ	39	A2	15.69, 15.69, 15.67, 15.65, 15.54	W2-W1	13
95	Δ	3	A3(a)	15.75*, 15.75, 15.74(Wb), 15.72, 15.70(V), 15.70(V), 15.65(L), 15.65(P)	W1	1
96-106	Δ	22	A3(a)	15.72(P)* 15.68*, 15.68(P)	W1	11
			A3(b)	15.78, 15.73, 15.72, 15.70(V), 15.68, 15.67, 15.65(V), 15.65, 15.58	W1-W0	
107-8	⊕	3	A3(b)	15.73(P)*, 15.71(P)	W1-W0	2
			SPECIAL ISSUE			
			Series with Α			
109-16	Α	9	A2/B	15.65(P)*, 15.60, 15.52, 13.85	W3-W1	8

No.	Controls	Vinga (no. spec.)	Style	Weight (grams)	Condition	No. spec.
117-18	Α Helmet	-	B2 B3 A2/A B2/A	15.65(V)* 15.67, 15.65(P), 15.61 15.58(L) 15.59*	W2 W2-W1 W2 W2	2
119-20	⊕ exergue: ΔI	7	B1	—		2
121-28	⊕ ΔI	1	B2 B2 B3	15.56(L)*, 14.71 (damaged, P) 15.69, 15.63, 15.55(Wb), 15.26 (damaged) 15.70(V), 15.61(L), 15.51*, 13.96 (damaged)	W2-W1 W3-W2 W2-W1	8
129-30	ΔI ⊕	1	B3	15.68(Wb)*, 15.64(L)	W2-W1	2
131-33	Α Bee	1	C1	15.60(P), 15.59*, 15.59(L)		3
134	Α Κ Cornucp.	1	C1	15.42 (damaged, Wb)*		1
135	Α Κ Helmet	-	C1	15.62(L)*	W3-W1	1
136-48	Α Κ	16	C1 C2 C3	15.56* 15.67(P), 15.63, 15.60(V)*, 15.59(L), 15.54(L), 15.41 (damaged) 15.65(V), 15.65(Mw), 15.59, 15.43 (damaged), 15.40 (damaged), 15.39*	W3-W1 W3-W1 W3-W1	13

NOTES ON THE COINS

1.




The tetradrachms contained in this hoard represent the bulk of the reduced-weight Palladion coinage with only a small final section absent. The arrangement of the material in the catalogue is based on this writer's recent analysis of Ptolemy Soter's satrapal money¹¹ from which, however, only a few pertinent results can be summarized here.

The tetradrachms can be divided into two main groups: a large "regular" issue serviced by the mint's principal engraver A (his signature, a small letter *delta*, can be seen on Alexander's aegis on the obverse) and a smaller "special" issue mainly serviced by two auxilliary artists B and C. These issues can be further subdivided into five series easily distinguishable by the controls used and the style of the engraver (or engravers) servicing them:

"Regular" Issue

Plain-letter series	engraver A	(PLATE V, 1-4)
Helmet series	engraver A	(PLATES V, 5-6; VI, 1-6)

"Special" Issue

Series with 	engravers A, B	(PLATE VII, 1-3)
Series with 	engraver B	(PLATE VII, 4-6)
Series with 	engraver C	(PLATE VIII, 1-6)

The isolation of the different hands makes it possible to trace the main stages of progress of each artist, expressed in the catalogue by the numbers 1 to 3 following the letters A, B and C. These stages are based on the design of the obverse (elephant scalp, curls, aegis scales, etc.), and representative examples of them are given in the plates. For the exceptional cases of collaboration between two artists a double notation

¹¹ O. H. Zervos, "The Alexander Mint of Egypt" (unpublished doctoral dissertation, New York University, 1974), pp. 81-203, 327-44, 422-23 (chart).

is given—for example, A2/B (Cat. 109–16) is to be read as “obverse die by artist A (stage 2) and reverse die by artist B.”

Since the stylistic progressions and the control marks can be associated with each other in tightly interlocking patterns, it is possible to determine accurately the sequence of the various emissions within their respective divisions. These considerations, taken in combination with the hoard evidence, lead to the important conclusion that the five series listed above are parallel rather than consecutive emissions. Although the correlation of the five series cannot be known very precisely, two things seem fairly certain: first, that the “regular” issue was the longest lived division of the coinage; and second, that the three “special” groups did not go beyond the time corresponding to the Delta hoard burial. So much can also be gathered from G. K. Jenkins’s brief review of the reduced-weight coinage.¹²

Jenkins’s analysis, though different from the present one in matters of detail, correctly distinguishes between tetradrachms with no contemporary gold—his groups (a) to (f), for types essentially present in the Delta hoard—and those which generally go with gold¹³—his group (g), absent from our hoard. Jenkins’s observations about the last named group are of interest here. He shows that group (g) commences with tetradrachms which have associated gold—as do most issues in the group—but ends with a few emissions for which there is no recorded gold.¹⁴ The ordering of group (g) is important because, as is shown below, it helps correlate the Delta hoard’s cut-off point with the resumption of the gold issue. Jenkins is also to be consulted on the pertinent chronologies which he summarizes¹⁵ and of which use is made below.

2.

The reconstituted inventory of the Delta hoard brings no unpublished tetradrachm varieties but includes four control combinations absent

¹² G. K. Jenkins, “An Early Ptolemaic Hoard from Phacous,” *ANSMN* 9 (1960), pp. 17–37, especially pp. 33–35.

¹³ This gold comprised a series of staters issued after Ptolemy Soter’s assumption of the diadem. The types are: Diademed head of Ptolemy/Elephant quadriga (Svoronos, *Ptolemies* pt. 2, pl. IV, 5–7, etc.).

¹⁴ Jenkins, “Ptolemaic Hoard,” p. 35 (chart at top).

¹⁵ Jenkins, “Ptolemaic Hoard,” p. 35 (chart at bottom).

from Dutilh's list: ⚡ (Cat. 1-2), ΔΙ Γ (Cat. 22), ⚡ Helmet (Cat. 117-18) and Helmet ⚡ ⚡ (Cat. 135). The last two varieties need not detain us, since they fall chronologically near the middle range of the coinage and therefore do not affect the limits of the hoard, but the other two need some comment.

The importance of variety marked ⚡ lies in its transitional character. The earliest tetradrachms bearing this control were of Attic standard but soon this issue was switched to a reduced weight of 15.7 g. Both pieces in our inventory are of the second kind. While the addition of this variety does not necessarily imply an extension of the hoard's upper limit—its style is identical to that of tetradrachms present in Dutilh's list (see PLATE I, 1-2)—its presence does point to the important fact that the upper boundary of the coin collection seems to fall together with two synchronous events: the inauguration of the tetradrachm weight reduction and the cessation of the early gold issue (about 312/310 B.C.).¹⁶

The last addition, control variety ΔΙ Γ, belongs to the final emission of the "plain" series in the find. Its absence from Dutilh's account meant that the "plain" series was very likely represented only as far as stylistic stage A2, while its parallel with the Helmet symbol continued into the later phase A3(b). With part of the gap filled, both branches of the "regular" coinage are now in better balance. Together with its opposite marked ⚡ ΔΙ Helmet (Cat. 107-8), the variety with ΔΙ Γ sets the hoard's lower limit. We can make the following observations here. Control ΔΙ, used contemporaneously for both series, comes, for all practical purposes, to an end at this time as does the Helmet symbol.¹⁷ The tetradrachms coming after the hoard's cut-off

¹⁶ The Attic weight gold (with Alexander's types) ends with emission marked ⚡ as does its associated silver. As at this time there was no adjustment in the weight of the gold, however, it can be assumed that the production of the staters with ⚡ went no further than the time of the silver weight reduction.

¹⁷ Absent from our inventory are two emissions containing both these adjuncts, ⚡ ΔΙ Helmet (Svoronos, *Ptolemies*, pt. 2, no. 176, pl. VI, 13) and ⚡ ΔΙ Helmet (Svoronos, *Ptolemies*, pt. 2, no. 178, pl. VI, 14), but they are so small (Svoronos lists 5 and 2 pieces, respectively) that even if these strikings were not in the original find, their duration would be too brief to affect materially our argument.

point—Jenkins's group (g)—are hence easily distinguishable from their predecessors, for they both lack the adjuncts ΔI and Helmet, and also are accompanied by gold nearly to the end of their issue (p. 47, above). It follows that the burial of the deposit can be placed certainly no later than the reissue of the gold and probably in close synchronism with the latter.

Looking now at the entire hoard, the additions made here would seem to fill most of the important gaps in Dutilh. A few varieties remain unrepresented however, but these are mostly very small strikings which may or may not have been present in the original find.¹⁸ As for the hoard's range, it seems to coincide with the natural divisions of the coinage described above and hence to contain the entire tetradrachm group produced during the gold gap. And the record of stylistic variants is substantially complete though stage B1 for emission with Ⓢ Ⓢ ΔI (Cat. 119–20) remains exceptionally unrepresented.

3.

If our sample leaves the span of the hoard basically unchanged, it diverges considerably from Dutilh's with regard to the distribution of the pieces among the principal divisions of the coinage. The difference can readily be seen in the following table where the two records are compared:

<i>Coinage</i>	<i>Dutilh</i>	<i>Zervos</i>
<i>"Regular" Issue</i>		
"Plain" series	22	22
Helmet series	142	86
<i>"Special" Issue</i>		
Series with Ⓜ	9	10
Series with Ⓢ	9	12
Series with Ⓢ	18	18
	<hr/> 200 sp.	<hr/> 148 sp.

¹⁸ The only serious lacuna is that for "regular" variety marked Ⓢ Aphlaston (see Svoronos, *Ptolemies*, pt. 2, no. 154; *SNG Berry* 1463) known only for style A1. Though not large, this emission is of comparable size to varieties present in this inventory (for instance, Cat. 95, 107–8) and therefore its absence is puzzling.

While the group with the Helmet is in both samples the dominant one, in the Vinga lot (Dutilh) it comprises 71 percent of the total, whereas in this inventory it is 59 percent.¹⁹ It seems the Vinga lot contained, on the one hand, an excessive number of coins marked K and Δ of the Helmet series (Cat. 82–94, 96–106, respectively), apparently because these were among the best-preserved specimens in the hoard and, on the other hand, too few coins of the “special” series, very likely because these were generally of an inferior style and displayed greater wear.

It would appear on the basis of the evidence that the sample of 148 tetradrachms assembled here conveys a better picture of the coin distribution in the original hoard than the larger Vinga aggregate does. Moreover, since the deposit was without doubt formed from whatever coins were circulating at the time of its burial (see p. 57, below), it follows that these distributions also give a fair approximation of the relative quantity in which the various control emissions were originally produced. It remains of course for future study to show how well such statistics compare with results obtained from the surviving dies.

4.

The condition of the hoard coins seems in general to correspond to the age of the respective strikings. Some pieces of early emission testify to a fair amount of circulation (W3), while specimens of brilliant condition (W0) tend to appear in the younger set. As a group, the coins are of superior preservation.²⁰ The weights also attest to this fact being, on the average, high, with more than two-thirds of the coins weighing above 15.60 g.²¹ It is possible that the lots making up our

¹⁹ This inventory takes into account two coins marked A Helmet (otherwise considered part of the “special” issue; Cat. 117–18), as well as four pieces originally in the New York lot (one piece marked with Helmet and three of the plain-letter variety), no longer traceable.

²⁰ The notations in the catalogue give in most cases the extremes of preservation rather than an average estimate for each group in question.

²¹ E. S. G. Robinson, “The Coin Standards of Ptolemy I,” *The Social and Economic History of the Hellenistic World*, ed. M. Rostovtzeff, vol. 3 (Oxford, 1941), pp. 1635–39, reckons the theoretical weight of the reduced tetradrachm at about 15.70 g. The weight distribution of the Delta coins (excluding eight damaged

sample contain choice selections (though certainly not to the extent that the Vinga coins did), but the presence of worn and damaged pieces as well as the consistent gradation of wear and weight with respect to the age of the coins, all seem to indicate that this aggregate is in general representative of the original hoard.

GENERAL CONSIDERATIONS

1.

The previous section was devoted to a description of the coins as such. The concern here is broader and deals with the hoard's general setting and circumstances of burial. On the basis of its contents the Delta find can be placed before the Egypt-1912 hoard (*IGCH* 1675)²² and shortly after the hoard from Kuft (*IGCH* 1670).²³ But these

pieces) is as follows: over 15.70 g, 18 percent; 15.69–15.60 g, 51 percent; 15.59–15.50 g, 23 percent; and under 15.50 g, 8 percent.

²² The latest Palladion tetradrachms here are of the category that goes with gold—Jenkins's group (g); see p. 47, above—absent in our hoard. This final group was a very closely knit one (see Jenkins, "Ptolemaic Hoard," pp. 34–35) and seems to have represented a brief emission.

²³ I have been able to establish on the basis of photographs and casts of Kuft coins entered in the Newell-Davidson inventory (at the ANS) that this hoard contained specimens of the "regular" issue through stage A2 (see Cat. 15–21) and of the "special" issue through B3 (Cat. 125–28) and C3 (Cat. 143–48). Though the smallness of the sample (8 pieces) is possibly responsible for the absence here of "regular" tetradrachms of stage A3, an inspection of photographs of 8 more pieces apparently from Kuft (countermarked Chester tetradrachms of 1876 and 1879 in the British Museum, but left out in Newell's list) revealed no such coins. In her diligently researched article of the hoard ("The Kuft Hoard of Alexander III Tetradrachms," *NC* 1974, pp. 14–30), D. Nash includes Svoronos varieties nos. 179 (here Cat. 95), 117 and 127—all in Nash's column B—which do in fact belong to my group A3 but, as they do not form part of the original Newell-Davidson record, I should be inclined to leave them out of this discussion. My opinion is that, on the basis of its Egyptian contents, Kuft must be considered somewhat earlier than the Delta find. One must be careful with the Kuft evidence however, because the deposit is an atypical one—it was unearthed not in the Nile Delta, where the other hoards of the period come from, but in Upper Egypt (the village of Kuft is situated between Kena and Luxor). One result of the unusual provenance seems to be the countermarking on the Kuft coins (many have 5 or 6 stamps, some even more) indicative of a mistrust

three hoards, though chronologically close together, fall into two distinct categories. To the first group belongs Kuft which comprises mostly Attic-weight Alexanders of foreign mintage, as do the majority of late fourth-century Egyptian deposits; and to the second group fall the two other hoards, made up exclusively of local tetradrachms of the reduced-weight variety.

Thus the Delta find inaugurates a new kind of Egyptian deposit which, like its descendants, is severely local in both the types and the weight standard of the coins. The character of these later hoards gives direct evidence of an Egyptian policy of fiscal isolation implemented by a sweeping ban on all silver of Attic weight (foreign and domestic). From what has been said so far, it would seem that this drastic measure was imposed shortly after the burial of the Kuft coins and that its full impact is first seen in the Delta hoard.²⁴

of coinage endemic in earlier Egypt but now mainly confined to the least Hellenized parts of it—I think that Nash does not sufficiently account for this in her article. Another peculiarity of the hoard is the time-lag by five or six years of the latest Ace-Sidon issues with respect to the latest local tetradrachms in it (for the dates, see note 29, below). Unless this discrepancy can be shown to derive from an incomplete record, it will have to be accepted as a fact in need of explanation. Again, I must take issue with Nash, for her opinion that the time-lag is typical of the period seems unlikely. The evidence of the Demanhur and Abu Hommos hoards (*IGCH* 1664, 1667, respectively), of the previous decade, argues against it. Indeed, at an average speed of 3 to 4 knots and sailing during daylight only, a ship could make the 900-mile trip from Sidon to Kuft in under 25 days, and to Alexandria in half the time (the rate of travel used here is that suggested by L. Casson for ships sailing along the coast with a favorable wind: "Speed Under Sail of Ancient Ships," *Transactions of the American Philological Association* 1951, pp. 136–48, especially p. 142). While the actual time necessary for the Levantine issues to reach such locations could be on the average much longer—perhaps a few months—it could hardly have amounted to years. Accordingly, it is more probable that the discrepancy of the Ace-Sidon tetradrachms in Kuft was somehow connected with the peculiarities of the hoard rather than a normal slowness of travel—but the actual mechanism of the delay is not obvious. In spite of the unusual features of Kuft, it seems safe to assume that in its general balance of Attic and reduced weight coins it reflects conditions of circulation prevalent in the Nile Delta (through which the coins surely passed) up to a time shortly before the burial of the Delta deposit, and it is in this sense that its date is to be understood here.

²⁴ Jenkins ("The Monetary Systems in the Early Hellenistic Time With Special Regard to the Economic Policy of the Ptolemaic Kings," *International Numismatic*

To better define the setting of our hoard, it is necessary to introduce another close contemporary: the early portion, jar I, of the Phacous find (*IGCH* 1678). Although that group of coins was discovered together with a second one, jar II (which contained Soter's silver of the Eagle type), it can be considered a self-contained hoard, as Jenkins suggested in his article on the find²⁵ and as can be inferred from the observations given below.

Like Kuft, Phacous jar I is mainly composed of foreign Alexander tetradrachms, but unlike the former contains hardly any pieces of the reduced-weight Palladion type—there are a mere three tetradrachms of the light weight variety, all dating from immediately after the Egyptian silver weight reduction of 312/310 B.C.²⁶ This means that while the Phacous hoarder continued to put away Attic-weight pieces until well after that date, he almost totally rejected the light weight tetradrachms—these emitted in vast numbers since 312/310 (see note 33, below)—and thus curiously avoided the very series of coins on which the collector of the Delta hoard came exclusively to depend.²⁷

Convention, Jerusalem, 1963, Proceedings (Tel Aviv/Jerusalem 1967) pp. 53–74, especially p. 59) has also called attention to the disappearance of foreign silver from Egypt but, as I shall show, his date for the event (about 300 B.C.) can probably be pushed back a few years. How the fiscal program dealt with the question of the gold can only briefly be touched upon here. The local gold had been suspended in 312/310, and it is probable that foreign gold was also recalled at the same time. It is indeed difficult to see how the latter could have remained in circulation while silver of two different standards was in current use. The issue of the local gold was resumed a few years later, but as this happened after the ban on the silver (as one could have predicted on the basis of the above and as the Delta find clearly indicates), it is unlikely that under these vastly altered circumstances foreign gold could have been allowed to circulate again. It is thus possible that the Attic-weight gold was actually demonetized in Egypt well ahead of the silver.

²⁵ Jenkins, "Ptolemaic Hoard," pp. 32, 36. Jenkins appears to have changed his position in a pertinent commentary in *IGCH* (p. 226 and entry on Phacous) where he suggests, if I read him correctly, that jars I and II were both formed in about 283. His earlier view is almost certainly the correct one.

²⁶ There are on record, for jar I, a total of 513 pieces of which 78 are of local mintage. The Newell-Davidson list of Kuft coins contains, on the other hand, some 271 tetradrachms of which 36 are Egyptian (8 to 16 coins are of the reduced weight variety; see note 23, above).

²⁷ The evidence could be interpreted as corroborating Svoronos' late date for the weight reduction of the silver (from about 305) but, as Jenkins demonstrates

The polarization of contents, which in the Kuft and Delta hoards is mitigated by the overlapping of the light weight tetradrachms, is here intensified to such a degree that Phacous and Delta practically become a mutually exclusive pair. But the utter dissimilarity between the latter finds only superficially disguises their chronological proximity, and an examination of the evidence will actually show that a single agent lies at the root of this difference. It has been noted that the absence of Attic-weight tetradrachms from our hoard was caused by the imposition of a ban on that money; it is here proposed that the rejection of reduced-weight pieces from Phacous jar I also stemmed from that cause.

The general format of Phacous and the enforcement of the monetary ban would indicate that this hoard was formed over an extended period of time (thus a savings deposit) and that it was put together in approximately the following way. The collector started out by putting away a variety of Alexander tetradrachms in jar I. He continued to do so until the first reduced-weight tetradrachms appeared. As mentioned, a few of the latter also slipped in, but at that time the collector added another container reserved exclusively for the storage of the light pieces.²⁸

The accumulation of coins in the two pots must have continued until about 305²⁹ when the monetary ban cut the supply of the heavy silver

("Ptolemaic Hoard," p. 36), this is rendered impossible by other testimony, and one must therefore conclude that the Phacous hoarder's exclusion of the light pieces was deliberate.

²⁸ Jenkins makes a similar suggestion ("Ptolemaic Hoard," p. 36). That the collector simply rejected the light pieces at such an early time is implausible for, as we know from other hoards, no one else did.

²⁹ Phacous contains Sidon tetradrachms down to the last known issue of the series (year 4, new numeration, 306/305 B.C.) and Ace pieces to that mint's penultimate emission (year 10, new numeration). Jenkins ("Ptolemaic Hoard," p. 28) notes that there is some discrepancy in Newell's chronology for Ace, but his equation of Ace 10 with 307/306 (after Newell) is unlikely. In Phacous, as in other large Alexander hoards, the Ace series is normally considerably better represented than is Sidon's and occasional mismatches between the terminal issues tend to affect Sidon more than Ace—not the other way round. Such is the case, for example, for Kuft: Sidon 22 = 312/311, Ace 37 = 311/310 (Newell, *Tyros Rediviva*, p. 10); and for Aleppo: Sidon 2 = 308/307, Ace 10 = 306/305 (Newell, *Tyros Rediviva*, p. 10). It would appear therefore

and thus put an end to the formation of jar I. The heavy pieces, now outlawed but desirable for direct dealings with foreign merchants, were kept but the supply of the devalued, albeit legal, tetradrachms was soon dispersed. Phacous exhibits a gap corresponding to the interval of about 305–300 when the light Palladion tetradrachms and their associated gold were the only coinages in circulation. Jar II with the Eagle-type silver must have been formed in the subsequent period, though the exact circumstances are of no interest here.

The discussion in the preceding paragraphs demonstrates that Phacous jar I is the latest known hoard of the old type and that therefore it, not Kuft, is the immediate antecedent of the Delta find. Another important conclusion is that the ban on the silver coincides with the issue of the latest foreign tetradrachms in Phacous and hence is to be dated in about 305.

2.

It is now possible to proceed with the matter of the hoard's burial. It follows from the foregoing that Phacous jar I provides a *terminus post quem* of 305 for our hoard. A similar limit can be independently derived from the series of later staters. The commencement of this gold can be placed, on account of its regal devices (diademed head of Soter/Elephant quadriga, ΠΤΟΛΕΜΑΙΟΥ ΒΑΣΙΛΕΩΣ), no earlier than Ptolemy's coronation shown by A. E. Samuel to have occurred sometime

that Ace 10 in Phacous should be placed opposite Sidon 4 and, like the latter, be dated in 306/305. I. L. Merker ("Notes on Abdalonymos and the Dated Alexander Coinage of Sidon and Ake," *ANSMN* 11 [1964], pp. 13–20) who successfully used hoard evidence to adjust Newell's chronologies for Ace through year 39 (old numeration) miscalculated, I think, the dates of the remaining four emissions (Ace 8 to 11) by not employing the evidence of Phacous and by using an incomplete record for Aleppo. The chronology of these last emissions should be readjusted, pending new evidence, according to the equation (Sidon 4 = Ace 10) suggested by Phacous. The absence of Ace 11 from the latter can now be explained by assuming that the monetary ban had been imposed before that issue could reach Egypt. Jenkins's date of 305 for the formation of Phacous jar I ("Ptolemaic Hoard," pp. 32, 36) though given without sufficient documentation turns out to be correct; but Nash's date in 300 seems to be too late (see my comments about the presumed time-lag of the Ace-Sidon issues in hoards, note 23, above).

during the Egyptian year November 7, 305 to November 6, 304.³⁰ The same *terminus* applies, of course, to the Delta hoard burial which has been shown to coincide approximately with the inauguration of the gold (see p. 49, above). If Samuel is moreover correct in further narrowing down the interval for the coronation to November 305 – February 304,³¹ it follows that the *terminus post quem* for our hoard can be adjusted accordingly.

The general evidence of the gold allows us to progress one step further. As stated, the termination of the first series of staters (of the Alexander type) came together with the change of the tetradrachm weight in 312/310. This synchronism shows that the cessation of the gold, whatever the specific reasons prompting it,³² was part of Ptolemy's overall fiscal program. Thus the reissue of the staters a few years later, far from being commemorative in nature as the royal insignia would outwardly indicate, must have also been part of the same plan. By analogy to the coincidence of the gold/silver measures of 312/310, it could be further suggested that the reappearance of the gold was synchronized with the announcement of the silver ban of 305—that the gold came no earlier than the latter is shown by our hoard.

This is also corroborated by other facts. The general evidence of Ptolemy's satrapal coinage shows that following the measures of 312/310 there was a surge in the output of tetradrachms.³³ The increased silver production must have been generated in large measure as a compensation for the halt of the gold—to maintain the constant money supply,

³⁰ A. E. Samuel, *Ptolemaic Chronology* (*Münchener Beiträge zur Papyrusforschung* 43, Munich, 1962), pp. 4–11.

³¹ He argues that the actual announcement of the event could have occurred during November 7, 305 to February 1, 304 or even as early as Egyptian New Year's Day on November 7, 305 (Samuel, *Chronology* p. 11).

³² A possible reason for the gold gap is suggested in note 24, above.

³³ The expanded silver coinage coincides very nearly with the emissions represented in the Delta hoard. A rough idea of the increased production can be gathered from a comparison, for instance in Svoronos, of the number of surviving Attic weight tetradrachms (about 326–312/310) to the corresponding number for the subsequent reduced weight series (about 312/310–305; for the last date, see below). A qualitative indication of the increase comes, on the other hand, from the hiring of the two extra die engravers (responsible for the "special" series B and C; see pp. 46–47, above) occasioned without doubt by the work overload during this period.

the mint must have found it necessary to produce five tetradrachms for each stater not struck, this in addition to the normal silver issue. But the sudden disappearance of Attic-weight silver in 305 would have once again threatened a new money shortage unless gold was promptly issued to relieve the situation. Gold was indeed struck, and it can be presumed, on account of the conditions described and the fact that the emission of gold had been normal for Egypt (the mint had issued it continuously until 312/310), that it came with no delay and probably, as already suggested, in close synchronism with the ban of the Attic-weight silver.

It follows that the burial of the Delta hoard, being an event contemporary to the reissue of the gold, must also be placed in the immediate vicinity of the silver ban of 395 and thus very close to the closing of Phacous jar I. Moreover, since Delta comes after Phacous, as well as after Ptolemy's coronation, it further follows that both hoards must be placed close to the time of coronation. In accordance with Samuel's chronological estimates of that event, and with Phacous coming first, the internment of the Delta hoard can be placed sometime in 304, perhaps in the early part of the year.

3.

A word must now be said about the manner in which our deposit was formed. The money was without doubt simultaneously withdrawn from circulation and immediately put away. This would follow from the continuity and completeness of its tetradrachm series and also from the consistent pattern of weights and circulation wear. The same conclusion now follows directly from the general evidence of money circulation which shows that while the tetradrachms in the Delta hoard belong mostly to the period before the fiscal adjustments of 305, their collection took place after that event.

One might speculate that had the hoarder acted sooner, the hoard would have attained a very different format and would have probably come to closely resemble Phacous jar I or even Kuft. The reason why the cache was formed at this particular time is not entirely clear, but it may be that the sweeping character of the recent changes regarding the silver and of the adoption of royal insignia for the gold created a

sense of apprehension about further drastic measures—a new currency devaluation did soon materialize—and accordingly prompted the collector into an act of speculative hoarding.

The Delta hoard of 1896 is the largest known example among finds containing exclusively reduced-weight Palladion tetradrachms. This sort of deposit is actually a rare one. Of the same kind is the small find made in Egypt about 1912 (*IGCH* 1675), mentioned earlier. A third instance is provided by the Peloponnesian hoard from Chiliomodi (*IGCH* 85) which, despite its non-Egyptian origin and its greater variety of contents, must be considered their kin, as it includes a similar cross section of Ptolemaic material. Like its Egyptian counterparts, the Chiliomodi find must have been formed after the passage of the silver ban.

The scarcity of this type of deposit can hardly be explained as an accident of survival, but must rather stem from the fact that the Palladion coinage lasted only briefly after Ptolemy's coronation, whereupon the advent of the new regal series, in about 300, put an end to its emission and circulation. For the remainder of Ptolemy Soter's reign, and also in the following decades, Egyptian hoards continue to give evidence of the same pattern of monetary isolation and thus consistently complement the testimony of the Delta hoard and its companions.

A TRI-DENOMINATIONAL HOARD OF EARLY ROMAN SILVER COINS FROM SICILY

(PLATES IX-X)

CHARLES A. HERSH

In 1974 a most important hoard of approximately 700 Roman silver coins struck during the first years of the denarius system was unearthed in Sicily. Not only is this by far the largest find from that early period, from which we have only one other of any magnitude, the Taranto hoard,¹ but this new find is the first one to contain all three silver denominations of that system—the denarius, its half, the quinarius, and its quarter, the sestertius—in substantial quantities. In fact, the number of silver sestertii from this hoard, just under 400, almost certainly exceeds the total of all of the coins of that denomination from this period hitherto known.

The entire find was first purchased by an amateur numismatist, a collector of a different series and period, who in turn sold it to Münzen und Medaillen A. G. of Basel, Switzerland.² As a finder's fee, the original purchaser was given one quarter of the hoard—about 25 percent of the pieces of each denomination, chosen at random. The main parcel was sent to me intact, as can be seen by its many extremely rare coins. It contained 525 pieces: 45 denarii, 183 quinarii and 297 sestertii. The second parcel, of 135 coins, reached me some six months later; it was the original purchaser's property. This group consisted of 3 denarii, 43 quinarii and 89 sestertii. All of the denarii with symbols, letters and monograms and all save 4 of those types of quinarii were missing; it was obvious that the specimens in this parcel had been picked over. Of the 660 coins I saw, there were 48 denarii, 226 quinarii and 386 sestertii. As only the main parcel was intact, I felt that it was important to show the

¹ C. A. Hersh, "A Quinarius Hoard from Southern Italy," *NC* 1972, pp. 75–88.

² My thanks to Pierre Strauss of that firm for his numerous kindnesses in connection with the hoard.

contents of each of the two lots separately, since only the material in the main parcel gives a true picture of what the hoard contained.

The condition of the majority of the coins in the find was not good, aside from normal wear. Many of the pieces were highly crystallized and thus very brittle; most had at least some horn-silver on their surfaces. Almost all of the silver showed some amount of wear; many pieces showed the effects of considerable usage, while a few were in almost mint condition. The coins in the hoard were evidently a cross-section of the Roman silver circulating in that area of Sicily at the time the material was buried. If their excellent condition is used as the criterion, the latest coins in the find appear to have been Sydenham 208 (Crawford 78/1) and Sydenham 225 (Crawford 77/1).³ This hoard can be dated to 195–190 B.C.

<i>Issue</i>	<i>Denomination</i>	<i>Sydenham</i>	<i>Crawford</i>	<i>Hersh</i>	<i>Helmet Type</i>	<i>Main Parcel</i>	<i>Second Parcel</i>	<i>Total Contents</i>
Anonymous	Denarius	140	44/5		A1	3		3
					A2	5	1	6
				5	A2	2		2
					B1	1		1
Anonymous	Quinarius	141	44/6		A2	5	1	6
					B1	10	1	11
Anonymous	Sestertius	142	44/7		B1 Var.	7	4	11
Anchor	Denarius	144	50/2		A2	3		3
Apex and Hammer	Denarius	149	59/1		A1	1		1
Staff	Denarius	158	106/3		B1	1		1
Spearhead	Quinarius	153	83/3		B1	4	2	6
Anonymous	Denarius	167	44/5		B3	4	1	5
		168	44/5		B2	1		1
					B3	1		1
					B4	1		1

³ E. A. Sydenham, *The Coinage of the Roman Republic* (London, 1952); M. H. Crawford, *Roman Republican Coinage* (Cambridge, Eng., 1974). My article cited in the following catalogue is "Sydenham in Retrospect: Revisions, Corrections, and Some Rare and Unpublished Additions to that Author's 'The Coinage of the Roman Republic'" *Mints, Dies and Currency, Essays Dedicated to the Memory of Albert Baldwin*, ed. R. A. G. Carson (London, 1971), pp. 9–32.

EARLY ROMAN SILVER COINS

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<i>Issue</i>	<i>Denomination</i>	<i>Sydenham</i>	<i>Crawford</i>	<i>Hersh</i>	<i>Helmet Type</i>	<i>Main Parcel</i>	<i>Second Parcel</i>	<i>Total Contents</i>
Anonymous	Quinarius	169	44/6		B2	13	3	16
					B3	28	17	45
					B4	26	5	31
Anonymous	Sestertius	142	44/7		B3	150	36	186
			44/7		B4	125	43	168
		142 Var.	44/7 Var.		B4	6	2	8
H	Quinarius	174	85/1A		B3	22		22
Λ	Quinarius	159	64/1		B3	2		2
⊙	Quinarius	181	86A/1		B1	2		2
⊙	Quinarius	188	84/2		B3	4		4
Ω	Quinarius	181A	102/2A		B3	1		1
Λ	Quinarius	183	103/2A		B3	5		5
Anonymous	Quinarius	Pre 176	102/2B		D2	3		3
✓ (Reverse)	Quinarius	176	97/2		D1	1	1	2
✓ (Obverse)	Quinarius	176A	98A/3		D2	5		5
Anonymous	Denarius	191	68/1B		C1	1		1
					C3	4	1	5
Anonymous	Quinarius	192	68/2B		C2	3		3
					C3	40	12	52
Anonymous	Sestertius	142 Var.	68/3		C3		1	1
		(Post 192)						
Corn ear	Denarius	193 Var.	68/1A	9	C3	1		1
	Quinarius	194 Var.	72/4	10A	C1	4	1	5
		194	72/4	10B	C2	3		3
		194 Var.	68/2A	10C	C3	1		1
Adze (Dolabella)	Quinarius	197	73/2		C1	1		1
C•VR	Denarius	199	74/1		C1	1		1
Anonymous	Denarius	191A	75/1C		C1	4		4
Staff	Denarius	208	78/1		E1	10		10
Corn ear and Staff	Denarius	225	77/1		E1	1		1
Uncertain	Sestertius	142	44/7		—	9	3	12
TOTALS						525	135	660

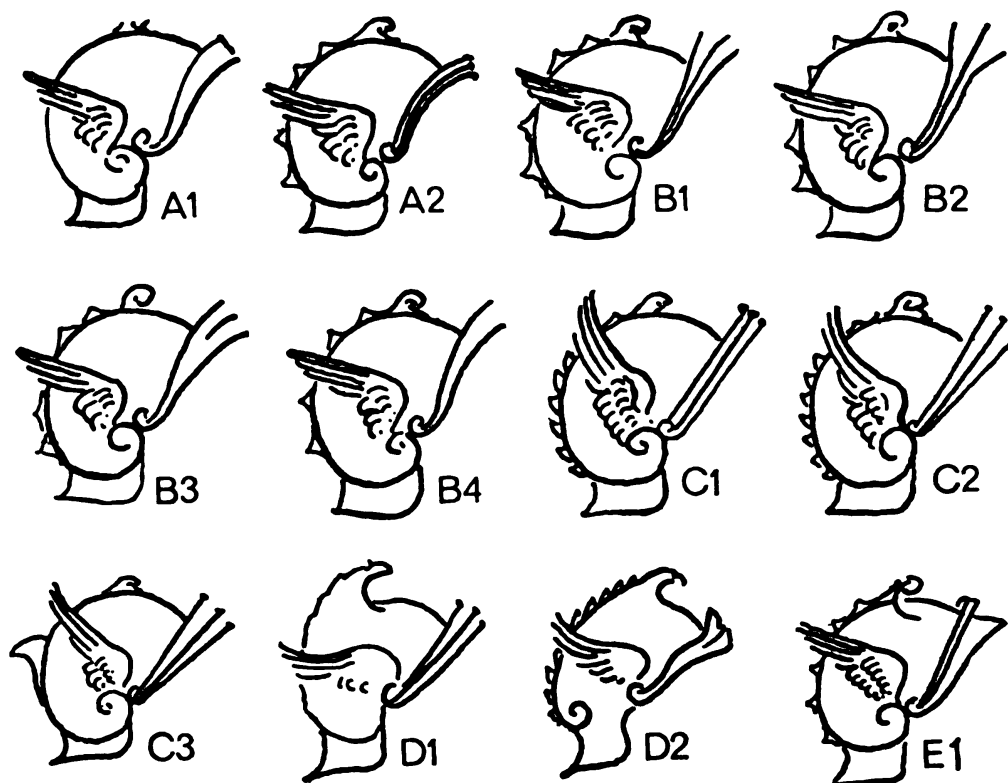


FIG. 1.

As noted earlier, the presence in the main parcel of the hoard of such great rarities as Sydenham 159, 176, 181, 188, 197, 199, 225 and Crawford 68/1A makes it clear that this part of the find was intact and complete when it reached me, which verifies what Pierre Strauss told me. Just as obvious is the fact that the second parcel was gone over and the non anonymous pieces for the most part removed, although evidently the selection from this lot was not made by an expert in this period of coinage, as the rarest of all the coins in the hoard, a specimen of Crawford 68/3, probably only the second known, was not removed.

The contents of this hoard create a severe problem for Crawford's absolute chronology of the early denarius system. He dates the earliest denarii and fractions to 211 B.C. and the latest pieces in this hoard (Crawford 78/1 and 77/1) to 209-208 B.C. The wear on many of the earliest coins from this find looks much more like 15 or 20 years of usage than 3 or 4. This fact would tend to vitiate further his quite remarkable dating of the coins of this early period, which has the

numerous issues of the first denarius coinage jammed into a four-year period (between 211 and 208 B.C.) for no really obvious reason and against the opinion of all other past and present writers and seemingly against the evidence of the coins. Crawford seems to rely basically on his feeling and insight for style to support his arrangement, a strange position indeed for one who has so assiduously attacked other writers for their regular use of this same criterion in other circumstances.

This find also presents severe problems for Crawford's relative chronology and arrangement of the issues of the early denarius system. Unfortunately, Crawford had only the tiny Pisticci and Tivisa hoards⁴ to work with while he was formulating his structuring of the first period of the denarius⁵ and, lacking clearly and carefully listed hoards of some size, he did not realize that the Orzivecchi, Drièves, Tarquinia and Valera hoards, all also quite small,⁶ were somewhat later than, rather than contemporary with, the earlier ones.

With the contents of the Taranto find and this Sicilian hoard as our guides, we can see certain signposts to help us, which were unavailable to or unseen by Crawford: (a) it appears that the issuing of quinarii and sestertii had ceased before the introduction of the E-type helmet;⁷ (b) the earliest E-type helmets appear to have been on Roman coins struck in Sicily (Crawford 78/1 and 77/1) and developed from the C-type helmet, used so generally on coins from that island; (c) based on the coins from the Taranto find, Sydenham's relative chronology for the issues of the South Italian mainland seems surprisingly valid and in light of this Sicilian hoard the same seems true of his ordering of the early issues from Sicily and (d) the fact that such large and common E-type helmet issues from the mint of Rome as Crawford 53/2, 57/2 and 58/2 and from a southeastern Italian mint (according to Crawford) as 88/2 and 89/2, which Crawford dates to the earliest years of the denarius coinage, do not appear in the Taranto find or this Sicilian hoard, while much rarer issues from the same mints and areas do occur there,

⁴ The former was composed of five Roman coins, the latter had seven.

⁵ M. H. Crawford, *Roman Republican Coin Hoards* (London, 1969).

⁶ They consisted of 38, 13, 12 and 10 Roman pieces respectively.

⁷ For a discussion of the helmet types, see Sydenham, p. xxvi f.

surely means that these issues were probably struck and circulated after the burial of these two treasures. It would certainly seem that all of the E-type helmet denarii were struck after the A, B and C-type helmets were discontinued on the Roman silver coins.

HOARD COINS ILLUSTRATED

	<i>Syd</i>	<i>Helmet</i>	<i>Location</i>
1	140	A-2	ANS
2	140 Hersh J	A-2	ANS
3	141	A-2	ANS
4	141	A-2	ANS
5	142	B-1 Var.	CH
6	142	B-1 Var.	CH
7	142	B-1 Var.	ANS
8	153	B-1	ANS
9	167	B-3	ANS
10	169	B-3	CH
11	169	B-4	CH
12	169	B-4	CH
13	142	B-3	CH
14	142	B-3	CH
15	142	B-3	CH
16	142	B-3/B-4	CH
17	142	B-4	CH
18	142 Var.	B-4	CH
19	142 Var.	B-4	ANS
20	159	B-3	CH
21	159	B-3	CH
22	181	B-1	CH
23	181	B-1	CH
24	188	B-3	CH
25	188	B-3	CH
26	188	B-3	ANS
27	Pre-176	D-2	ANS
28	176	D-1	ANS

EARLY ROMAN SILVER COINS

65

	<i>Syd</i>	<i>Helmet</i>	<i>Location</i>
29	176A	D-2	ANS
30	176A	D-2	ANS
31	191	C-3	ANS
32	192	C-3	CH
33	Post-192	C-3	CH
34	194 Var.	C-1	CH
35	194 Var.	C-1	ANS
36	194	C-2	CH
37	197	C-1	CH
38	199	C-1	ANS
39	191A	C-1	ANS
40	225	E-1	CH

THE DENARII OF P. CREPUSIUS AND ROMAN REPUBLICAN MINT ORGANIZATION

(PLATE XI)

T. V. BUTTREY

THE MATERIAL

More than 20 years ago, in an article which Crawford has properly described as "revolutionary," Charles Hersh demonstrated the articulation of Crepusius's coinage through the proper arrangement of the symbols, letters, and numbers with which the dies were marked.¹ Hersh's article remains the fundamental work, and everything which follows here stems from it, even in disagreement.

P. Crepusius was *monetalis* in 82 B.C., along with L. Marcius Censorinus and C. Mamilius Limetanus. The college is certain since the three together signed a joint denarius issue (Sydenham 736, Crawford 360).² There are only five other such issues in the Republican coinage;

1 C. A. Hersh, "Sequence Marks on Denarii of Publius Crepusius," *NC* 1952, pp. 52-66. M. H. Crawford, "Control-Marks and the Organization of the Roman Republican Mint," *PBSR* 1966, pp. 18-23.

² The moneyers' signatures are disposed, Censorinus's on the obverse, on the reverse Crepusius's above the exergual line and Limetanus's below for the first few dies, but interchanged for the great majority of dies. Crawford argues from the position of Crepusius's signature on the earliest reverse dies in the series that he was the senior moneyer, since in this period legends which are continuous from one side of the coin to the other more often begin on the reverse. The argument is clearly not strong. See too below, on the relation of Crepusius's coinage to the joint issue.

The obverse type of the joint issue is not in question here, but it might be noted that the traditional identification of the veiled and diademed female as Venus, most recently in Crawford, *RRC*, is unsupported by accompanying legend or by analogy. Venus is frequently found on the Republican coins, normally diademed but never veiled. The apposite analogues are Concordia and Libertas, both of whom so appear, the latter however only in 43-42 B.C. on coins of Brutus and Cassius. On balance Concordia seems the best identification. There need be no political flavor to it, simply an externalization of the cooperation of the moneyers themselves in the joint issue.

three of these are the only issues of the moneyers, who did not strike individually; in the others either one or two of the moneyers struck individually but not all three.³ The coinage of 82 is therefore unique, since all the moneyers signed their own denarii as well as the joint issue.⁴ Control marks appear in all four series.

The denarii of Crepusius (Syd. 738, Cr. 361) bear types which remain unexplained.⁵ More important for our purposes, they bear a variety of obverse and reverse marks which Hersh has sorted out. He first of all identified the obverse symbols, which had been so variously described and misdescribed in the past that no one knew accurately their nature or extent. He found there to be 23, to which now can be added a rare twenty fourth at the end of the series. He also isolated the Roman numerals of the reverse dies and showed that they are included within a series running from 1 to 519 (I emend his 523 below). Hersh's second contribution was the discovery that no two obverse dies bear the same letter or the same symbol-letter combination, and no two reverse dies the same number. The obverse material falls into 26 groups on his arrangement:

0.	no letter	obv. dies: 1
1.	letter at r.	obv. dies: presumably 21
2-15.	symbol at r., letter at l.	obv. dies: ca. 457

³ Q. Mar., C. F., L. R. (Syd. 541, Cr. 283); M. Calid., Q. Met., Cn. Foul. (Syd. 539, Cr. 284); Cn. Domit., M. Sila., Q. Curt. (Syd. 538, Cr. 285); L. Metel., A. Alb., C. Mall. (Syd. 611, Cr. 335); Gar., Ocul., Ver. (Syd. 721-2, Cr. 305A). A further example might be Ap. Cl., T. Mal., Q. Ur., if the last abbreviations represent a name (so most recently Crawford) rather than *quaestores urbani* (Syd. 570, Cr. 299).

⁴ Sydenham's separation of the denarii in the sole name of Limetanus, whereby these are attributed to "auxiliary Italian Mint B" and all the rest of the coinage of the college to Rome, is superfluous. The whole Italian mint business is rightly rejected by Crawford, *RRC*, p. 47, note 1.

⁵ The obverse male head is taken by Sydenham to be Apollo; "Laureate head (? Apollo)" by Crawford. The scepter attribute seems inappropriate, and on some dies the head has long sideburns if not a scanty beard. Unfortunately the reverse of horseman brandishing spear allows no more precise identification which might illuminate the obverse (note that the denarii of Crepusius's colleagues bear associated obverse and reverse types: Censorinus, Apollo and Marsyas; Limetanus, Mercury and Ulysses). Can Crepusius's obverse bear a head of a youthful Jupiter Feretrius, with whom the scepter was particularly associated?

In group 0. *no letter* only one obverse die was cut. In group 1. *no symbol* one die serves for one letter, A, B, C . . . X; presumably 21 dies were cut in all for the 21 letters of the Latin alphabet. In groups 2–25 each symbol covers a set of 21 dies (with three exceptions; see below), thus: 2. *fulmen-A, fulmen-B, fulmen-C . . . fulmen-X*.

The catalogue is a replication of Hersh's, arranged by obverse symbol, then by progressive reverse number. It is likely that the obverse dies were fixed in anvils and the reverses used with them at random from the die box. It therefore might have been best to list the letters alphabetically under each symbol as a closer representation of consecutive die use, and let the numbers fall as they might.

Of the 90-odd additions to Hersh's original list about a third have been kindly provided by Hersh himself, while others were brought to my attention by Michael Crawford; to both my thanks are owing for their thoughtful assistance. Thanks are owing as well to the many curators whose collections have provided hitherto unknown varieties of Crepusius's denarii. Source reference is given for all new insertions. The reference abbreviations are those of Hersh, with the addition of "Fava" for several new pieces from Turin, Anna Serena Fava, *I Simboli nelle monete argenteo repubblicane* (Turin, 1969). References are also given to pieces in Hersh's list in those cases where I emend his description. (I emphasise that some "emendations" are simply my reading as against his: the obverse letters occasionally, and the reverse numbers frequently are ambiguously formed or imperfectly preserved.) I have thought it superfluous otherwise to reiterate Hersh's individual coin references which can be found in his article. "H" indicates a coin already listed by him; "H*" indicates that I have seen the piece or another of the same die pair.

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
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0. No Letter, No Symbol

—	5	H*
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1. No Symbol, Letter to right

O	1	H*	F	3	H
C	2	H	I	3	H

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
F	4	BM-2669	D	14	Hannover
K	5	H	O	14	ANS
S	5	H*	A	15	H*
K	6	H	B	15	H*
O	8	H*	G ⁷	17	D-8754 Hersh, "C"
F	9	H*			
E	10	CH	D	18	H*
K	10	CF-1221 Hersh, "F"	E	19	H
			V	19	H
I	11	H*	F	21	H
[]	12	D-8749	T	22	Berlin
H	13	H*	X	23	Bari 2415
M	13	H	S	24	H
N	13	H*	I	26	H*
Q ⁶	13	D-8759, 8760 Hersh, "O"	X	26	H*
			S	28	H*
C	14	H*	V	37	H*

2. Fulmen

D	1	H*	D	36	H*
A	3	H*	M	44	H*
D	5	H	C	45	CH
C	6	H	F	45	H*
P	6	H	K	46	H
E	8	H*	K	47	CF-1223
A	18	H*	H	50	H*
A	20	H	N	50	H*
E	30	H	H	53	H
B	32	H	L	55	H*
E	33	Naples	B	58	H
B	35	BM-2676 Hersh, "40"	P	58	D-8868 Hersh, "63"

⁶ Not the same obverse die as that of O-1.⁷ Not the same obverse die as that of C-14.

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
N	65	H*	V	73	H
O	65	H*	M	76	CF-1227 Hersh,
T	68	H*			"wheat-ear"
X	71	H	S	76	BM-2681 Hersh,
P	72	H			"grasshopper"
Q	73	H*	S	77	H*
S	73	H*			

3. Feather

A	6	H*	S	45	H
H	6	Rio Marina hoard	G	48	Berlin
D	15	H	M	51	H
G	21	H*	X	54	H*
P	22	H	V	58	H*
N	25	H*	X	59	H*
N	40	H*	V	61	CH
B	42	H*	C	67	H*
N	44	H*	K	67	H*
T	44	H	F	[]	Washington
N	45	Copenhagen			University

4. Wheat ear

Q ^a	33	D-8824 Hersh,	H	77	H
		"O"	G	78	CF-1229
D	63	H*	O	86	H*
G	63	H*	Q	86	Berlin
B	64	H	I	88	H
G	70	H	Q	94	H
H	76	D-8823, plated,	A	100	H*
		CF-1226, appar-	K	101	H*
		ently not plated	A	103	H*
M	76	CH	Q	105	BM-2682 Hersh,

^a Not the same obverse die as that of O-86. The tail of the Q is weak.

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
		"O"			
T	105	H*	V	106	H
5. Grasshopper					
N	42	H	R	85	CH
H	47	H	T	85	H*
O	49	ANS	N	86	H*
E	62	H*	(None)	87	H*
E	64	H	I	92	H*
N	66	H*	(None)	98	H*
I	67	H*	I	99	H*
N	69	H	T	99	ANS
L	74	H*	(None)	105	Villa Potenza hoard
K	76	H*	(None)	108	CF-1233
O	76	H*	X	110	CH
S	76	D-8986	X	113	H
T	78	H*	T	117	H*
N	81	H	A	[]	G. Hirsch sale (1 April 1974), 446
(None) ⁹	81	H*			
S	82	CH			
T	84	H*			
6. Grapes					
A	82	H	L	113	H*
E	82	H	N	116	H*
F	90	H*	K	117	H*
I	92	Copenhagen	S	125	H*
I	94	H*	X	127	CF-1278
K	104	H*	X	132	H*
R	104	H*	T	135	H
M	107	H*	H	[]	ANS
P	111	H*	O	[]	Berlin
V	111	H*			

⁹ The engraver accidentally omitted the control letter. What it ought to have been is uncertain; however it was not E, I, K, N, O, S or T.

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
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7. Ivy leaf

A	91	H*	O	125	H
E	96	H*	C	126	H
H	111	H*	G	126	H*
E	112	H	M	129	H*
H	112	H*	R	133	H*
H	114	H	F	136	D-8836
C	116	CH	X	137	H
H	117	H	B	143	H
B	118	H*	P	144	CH
I	119	H	Q	153	D-8842 Hersh, "152"
M	119	Bologna	N	158	Cambridge
C	120	H	S	160	D-8934
C	122	H*	T	162	H*
C	125	H			
F	125	H*			

8. Flower

I	111	D-8847 Hersh, "161"	O	161	H*
			N	163	H
D	133	H*	R	166	D-8853 Hersh, "K"
P	133	CH			
A	134	H	O	167	H
O	146	CH	P	167	H*
L	150	H	S	168	H
N	151	H	V	173	Crippa list 1971 no. 2, 206
H	152	H*			
L	152	H*	Q	175	H*
B	153	H	X	180	Berlin
F	155	H	Q	184	H
K	159	H*	Q	191	H*
V	159	Bari 2418	C	[]	Oxford
P	160	ANS			

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
9. Thyrsus					
D	141	H	D	167	H*
R ¹⁰	147 or	D-9002 Hersh,	C	169	H
	148	"D 146"	E	170	H
D	148	H	F	170	H
C	155	H*	D	171	H*
D	157	H*	F	178	H
A	159	H	D	179	H*
R	163	H*	D	182	H*
10. Bird					
E	151	H*			February 1928),
N	165	H*			1097
A	172	H*	K	207	H*
L	172	H	M	208	D-8946 Hersh,
B	178	H*			"207"
G	187	H*	Q	209	D-8952 Hersh,
G	189	H*			"O"
I	190	H	X	209	H*
E	195	H*	K	210	H
[]	196	BM-2692	P	212	H*
C	197	CH	X	219	H*
G	197	H*	V	220	H*
P	197	H*	K	235	H*
A	198	BM addenda	C	239	Copenhagen
A	199	CH	[]	265	CF-1255
C	204	Ratto sale (8	D	[]	Turin, Fava 399
11. Poppy					
H	165	H*	S	165	H
Q	165	H*	N	168	CH

¹⁰ Neither here nor on R-163 is the R fully visible, but the die is not the same as that of D-141, etc.

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
L	172	H*			"197"
C	174	H*	N	201	H*
B	176	H*	L	202	in trade
A	181	H*	V	205	H*
K	181	H*	F	206	H*
R	184	H*	M	206	H*
H	187	H*	S	209	H*
K	187	H	S	210	H*
P	187	H*	P	211	H
C	188	H	T	212	H
Q	191	H	S	216	D-8908 Hersh,
E	192	H*			"206"
F	197	Bologna	X	218	H*
H	199	D-8898 Hersh,	D	[]	CF-1234

12. Lizard

B	209	H	P	244	Berlin
K	224	H	F	246	CH Hersh, "245"
N	224	H*	X	247	H
A	225	H*	[]	255	BM addenda ex-
D	226	H*			Mabbott
F	230	H	V	256	H*
E	232	H*	P	262	H*
R	237	H*	X	273	H*
C	238	CH	[]	274	Oxford Hersh,
H	239	H*			"L"
T	241	H*	I	279	H*
B	243	D-8914	I	284	H*

13. Crescent

E	208	ANS	A	225	H*
D	210	H	A	229	H
I	220	Berlin	C	230	H*
R	220	ANS Hersh, "B"	D	235	H*

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
A	237	H	M	263	H
I	239	H	Q	265	H*
K	240	H*	O	266	H*
S	242	Bologna	L	269	H ₁
D	245	H*	M	271	H*
K	246	Stuttgart	L	272	H
O	249	H	S	274	H
R	249	D-8814	S	292	H
K	250	H*	S	293	D-8816
Q	251	H	T	296	H
N	253	Signorelli coll.	S	297	H*
N	254	Brandosa hoard	H	[]	CF-1214
V	256	Cosa hoard 1547			

14. Bidens

B	265	H*	V	300	CH
A	267	H*	O	309	H*
F	267	H	K	310	Cosa hoard 1552
G	276	H*	L	310	H*
G	278	H	B	315	H*
E	284	Hannover	S	317	H*
F	284	H	T	318	H*
I	300	H*	I	326	H*

15. Ear

B	275	H*	O	309	Knobloch coll.
C	276	H*	T	309	H
C	282	H*	E	311	H*
S	291	H	G	313	H
H	294	H*	Q	316	H*
F	295	H*	O	319	H*
L	298	H	S	321	H*
P	301	H*	P	328	Venice, Museo Archeologico
C	303	Knobloch coll.	S	343	H*
K	307	H*			
M	308	H*			

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
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16. Star

B	301	H	H	355	H*
I	313	H	N	359	H*
M	313	H*	X	361	H*
A	315	H	O	362	H*
D	319	H	P	364	H*
B	332	H*	M	365	H*
D	333	Naples	H	366	H
A	341	H*	S	370	H*
G	345	H	V	374	CH
E	348	D-8780 Hersh, "347"	R	375	H
[]	350	ANS Hersh pre- fers "E"	S	377	ANS
			M	379	CH Hersh, "V"
			L	[]	Luxembourg

17. Branch

C	301	Hersh	[]	336	Cahn sale 71 (14 October 1931), 1279
N	315	H			
D	327	H*			
M	328	D-8792 Hersh, "333"	G	337	H*
			F	345	H*
H	331	H	[]	346	BM-2705
H	333	Brandosa hoard	Q	361	H
F	335	CH	[]	367	Copenhagen

18. Hooked Staff

K	353	H*			"K"
B	361	Turin, Fava 112	R	392	H*
C	362	H	B	395	H
B	369	ANS Hersh, "R"	Q	396	H
N	377	Ascoli Piceno	Q	402	H
O	384	H*	R	406	H*
R	390	D-8804 Hersh,			

*Letter Number Reference**Letter Number Reference*

19. Cornucopia

[]	377	CF-1272 Hersh, "F"	V	407	Signorelli coll.
G	377	H*	R	410	H*
L	377	H*	F	413	H
D	385	H	L	414	H*
B	387	D-8793 Hersh, "392"	T	415	Copenhagen
K	389	H*	Q	417	H*
H	390 or 391	D-8795 Hersh, "390"	P	418	H
H	393	CH Hersh, "392"	X	418	H
M	393	CH	X	419	H*
O	401	H*	P	432	H*
			I	[]	CF-1264
			S	[]	CF-1216

20. Altar

A	401	H*	G	434	H
D	410	H	D	441	H
F	412	H*	G	444	H*
G	415	Turin, Fava 217	O	[]	CF-1275
G	425	H*			

21. Turtle

E	407	H	P	458	H*
L	416	CH	T	459	Berlin
[]	418	Alba di Massa hoard	P	462	Bologna
D	429	H	O	464	H
F	434	H	Q	464	Bologna
K	435	CH	D	467	CH
M	442	H*	R	470	H*
L	444	Munich	C	[]	Munich

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
22. Wing					
D	430	H*			Archeologico
F	437	H	K	466	CH
F	440	H	O	472	H*
K	444	H*	X	475	H*
L	444	D-8772 Hersh, "443"	V	476	ANS
O	454	H*	T	477	CF-1270 Hersh, "475"
C	455	H*	T	479	CH
C	457	H*	S	487	H
L	460	H*	S	497	CH
B	461	H	S	518	D-8776 Hersh, "523"
P	462	Venice, Museo			
23. Shell					
K	449	H	M	477	CH
M	450	Turin, Fava 367	O	492	Berlin
S	460	H* S retrograde	M	496	CH
A	462	H*	X	502	CH
D	467	H	K	509	D-8937 Hersh, "X 508"
B	469	H			
G	469	H	K	518	CH
24. Palm branch					
A	477	H*	D	498	H*
F	485	H	F	500	H
I	492	H*	O	500	H*
D	493	D-8975	D	501	H*
D	494	H*	H	501	H
R	495	D-8976	F	503	H*
H	496	H	N	506	H*
K	497	H	I	507	ANS
N	497	H	I	511	H*

<i>Letter</i>	<i>Number</i>	<i>Reference</i>	<i>Letter</i>	<i>Number</i>	<i>Reference</i>
P	519	H*			sale (December
B	[]	Copenhagen			1970) 106
C	[]	Leu <i>Hippikon</i>			

25. Barley grain

A	497	Cosa hoard 1557
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Appendix A — Reverse dies struck to uncertain obverses

<i>Number</i>	<i>Reference</i>
57	D-8748
217	Crippa list 1971 no. 1, 333
261	D-8752
322	Bologna
340	Cambridge
352	Copenhagen
378	Oxford
404	Berlin

Appendix B — Hybrid coins

<i>Letter</i>	<i>Symbol</i>	<i>Number</i>	<i>Reference</i>	<i>Dies otherwise attested</i>	
				Obverse	Reverse
D	16. Star	205	CH Good silver	x	x
E	2. Fulmen	325	H* Good silver	x	
O	24. Palm branch	354	H	x	
T	12. Lizard	360	H Plated	x	
V	18. Hooked Staff	464	CH Good silver		x

The obverse dies now attested are shown on Table I. The symbols are arranged in Hersh's order. For each symbol there were cut presumably 21 dies, lettered A through X. That implies a sequence of die cutting, if not die use, within the limits of each symbol. Two symbol series appear to be short, 9. *thyrsus* of which only letters A-F plus R have been found, and 20. *altar*, A-G plus O. The last symbol in the

TABLE 4

Crepusius — Obverse Dies Attested

	Letter																No Letter Letter Omitted				
0. no letter																		x			
1. no symbol	A	B	C	D	E	F	G	H	I	K	M	N	O	Q	S	T	V	X			
2. fulmen	A	B	C	D	E	F		H		K	L	M	N	O	P	Q	S	T	V	X	
3. feather	A	B	C	D			G	H		K		M	N		P		S	T	V	X	
4. wheat ear	A	B		D			G	H	I	K	M		O		Q		T	V			
5. grasshopper	A			E			H	I	K	L		M	N	O		R	S	T	X	x	
6. grapes	A			E	F		H	I	K	L		M	N	O	P		R	S	T	V	X
7. ivy leaf	A	B	C		E	F	G	H	I		M	N	O	P	Q	R	S	T		X	
8. flower	A	B	C	D	F		H	I	K	L		M	N	O	P	Q	R	S	V	X	
9. thyrus	A		C	D	E	F										R					
10. bird	A	B	C	D	E		G		I	K	L	M	N		P	Q			V	X	
11. poppy	A	B	C	D	E	F		H		K	L	M	N		P	Q	R	S	T	V	X
12. lizard	A	B	C	D	E	F		H	I	K		N		P		R		T	V	X	
13. crescent	A		C	D	E		H	I	K	L	M	N	O		Q	R	S	T	V		
14. bidens	A	B		E	F	G		I	K	L		O				S	T	V			
15. ear	B		C		E	F	G	H		K	L	M		O	P	Q		S	T		
16. star	A	B		D	E		G	H	I		L	M	N	O	P		R	S	V	X	
17. branch		C	D		F	G	H				M	N			Q						
18. staff	B		C						K			N	O		Q	R		V			
19. cornucopia	B		D		F	G	H	I	K	L	M		O	P	Q	R		T	V	X	
20. altar	A		D		F	G						O									
21. turtle		C	D	E	F				K	L	M		O	P	Q	R		T			
22. wing	B		C	D	F				K	L		O	P			S	T	V	X		
23. shell	A	B		D		G			K		M		O			S			X		
24. palm branch	A	B	C	D	F		H	I	K			N	O	P		R					
25. barley grain	A																				

coinage, 25. *barley grain* was unknown to Hersh but came to light in the great hoard of Republican denarii found in 1968 during the excavations at Cosa conducted by the American Academy in Rome (PLATE XI, I). Fortunately, its letter A is clear.¹¹ It marks the termination of the series of obverse dies, and makes it possible for us to calculate their number. I assume that the *thyrsus* and *altar* series were indeed short, that the rest were full and included all letters A–X, but that of the last, *barley grain*, only die A was cut. These dies together total 479, of which 321 are so far attested. Of the others, perhaps some broke quickly, or at the end of the series were not used at all. But it would be absurd to suppose that the symbol-letter combinations which we have not yet found had been omitted in the cutting. Rather, they remain to be discovered, and we can be confident that the number of 479 obverse dies, if not demonstrably exact, is close to the actual total produced.

The reverse dies now attested are shown on Table II. The Table includes those few dies known only from hybrids whose reverses seem to be genuine, or direct copies (e.g., by impaction) from genuine coins. The uppermost limit of reverse numeration is 519. (My reading of the piece in Paris, 22. *wing* D–8776, which Hersh read as 523, is 518).

Now Hersh further showed that if the denarii of Crepusius were arranged by reverse die numbers the obverse symbols tended to group. As long as one were not confused by the overlapping between groups—i.e., where at the point of contact between two symbol groups some higher reverse numbers occurred with the earlier group and some lower numbers with the later—the symbol groups could be seen as differentiated parts of the coinage. The groups were not all struck at once; each exhibits its own range of reverse die numbers. Hersh therefore properly assumed that the reverse dies were used in roughly the order of their numeration (the number of course indicates the order of cutting, not of striking), and that therefore the symbol groups could be ordered numerically by the reverse dies to which they were paired. The essential

¹¹ A second example had been listed in the Ratto sale catalogue, May 12, 1925 (Coll. Alessandro Moneta), 223, "Tête d'Apollon à d., devant un grain d'orge." Unfortunately the coin is not illustrated, and there is no indication in the text of either obverse letter or reverse number.

TABLE II

Crepusius — Reverse Dies Attested

1	2	3	4	5	6	8	9	10	11	12	13	14	15	17	18	19	20
21	22	23	24	25	26	28	30	35	36	37	38	39	40	41	42	43	44
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
81	82	83	84	85	86	87	88	90	91	92	93	94	95	96	97	98	99
101	103	104	105	106	107	108	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	129	130	131	132	133	134	135	136	137	138	139
141	143	144	145	146	147	148	150	151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218
221	222	223	224	225	226	227	229	230	231	232	233	234	235	236	237	238	239
241	242	243	244	245	246	247	249	250	251	252	253	254	255	256	257	258	259
261	262	263	264	265	266	267	269	270	271	272	273	274	275	276	277	278	279
281	282	283	284	285	286	287	289	290	291	292	293	294	295	296	297	298	299
301	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319
321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338
341	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359
361	362	363	364	365	366	367	369	370	371	372	373	374	375	376	377	378	379
381	382	383	384	385	386	387	389	390	391	392	393	394	395	396	397	398	399
401	402	403	404	405	406	407	409	410	411	412	413	414	415	416	417	418	419
421	422	423	424	425	426	427	429	430	431	432	433	434	435	436	437	438	439
441	442	443	444	445	446	447	449	450	451	452	453	454	455	456	457	458	459
461	462	463	464	465	466	467	469	470	471	472	473	474	475	476	477	478	479
481	482	483	484	485	486	487	489	490	491	492	493	494	495	496	497	498	499
501	502	503	504	505	506	507	509	510	511	512	513	514	515	516	517	518	519

element selected by Hersh on which to base the order was the *lowest number reverse die*. That is, 3. *feather* is struck with reverses numbered 6 to 67, 4. *wheat ear* with dies numbered 33 to 106. The upper number is not helpful, since the obverse symbol group once put in use could continue indefinitely. But the lower number reveals that whereas the *feather* group was in production almost at the very beginning of reverse die use, the *wheat ear* group came to the anvil only after reverse dies 1–32 had already gone out of use. Putting together all the symbol groups in this way, Hersh produced not only an arrangement of Crepusius's denarii, but a complete serialization; the chronological framework of the structure is indicated in his title, where symbols, letters and numbers are not just control marks but "sequence marks" The ordering of the symbols against the numbered reverses can be seen in Table III, where the black bar indicates the area between the minimum and maximum reverse numbers struck at that symbol, within which the other reverses fall. Overlapping merely indicates that several reverse dies normally survived one obverse symbol group, to be used with its successor.¹²

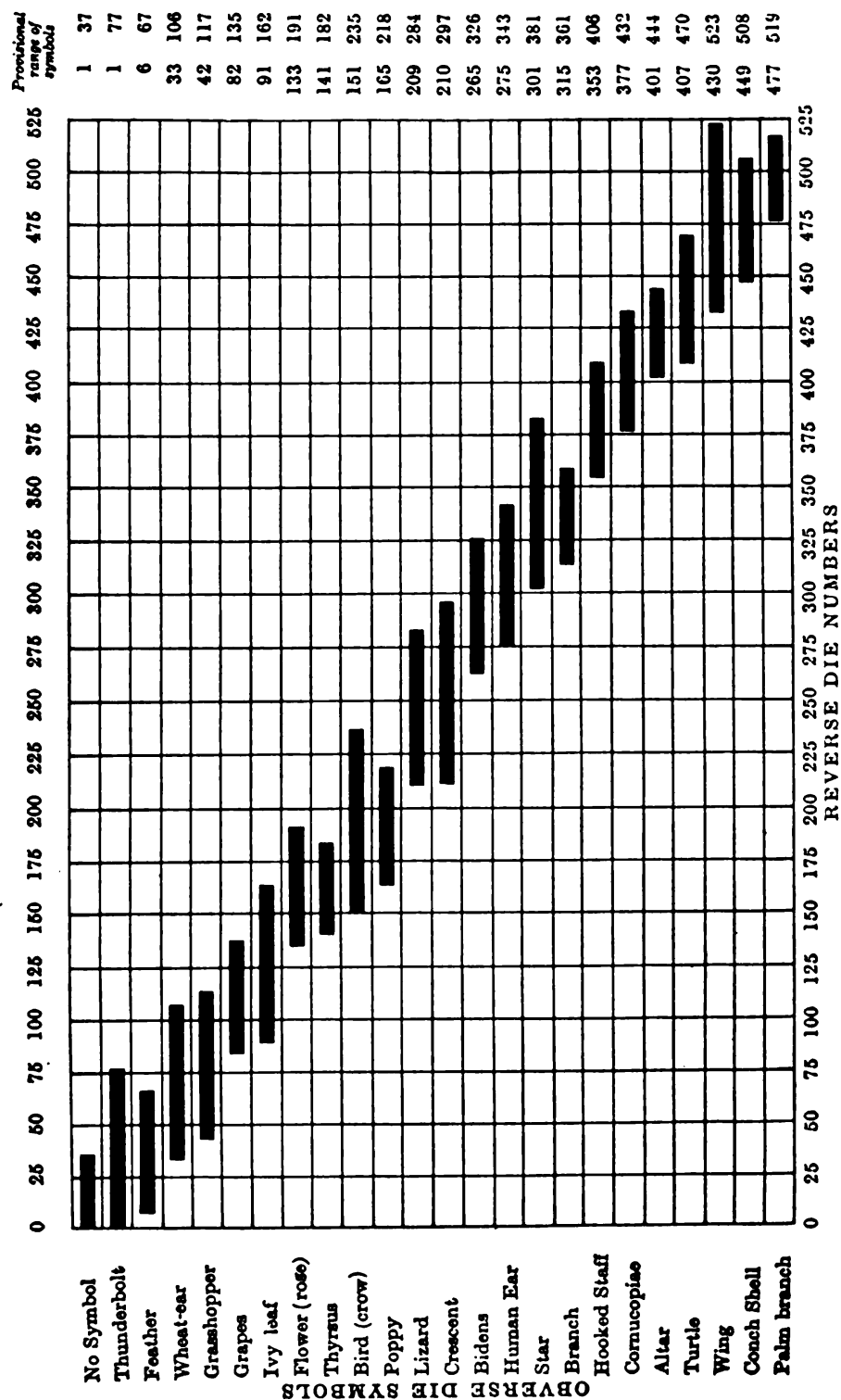
THE ORDER OF CREPUSIUS'S COINAGE — I

Hersh's analysis now makes possible some further elaboration and manipulation. First, on the smallest scale, within the individual symbol group. Hersh unintentionally implies that the lot of 21 dies, e.g., 3. *feather*—A, B, . . . X, were all available at once: "the obverse dies bearing a given symbol were kept in one separate box." That there was a reverse die box is easy to accept, though we shall see below how rapid the rate

¹² The table is reproduced from Hersh, and is not corrected to the catalogue. Note that the bars indicate the spread from the minimum to the maximum reverse die number for each symbol group; they do not necessarily indicate joint use of dies within the same range for more than one symbol. Thus reverse die 100 falls within the range of groups 4, 5, 6 and 7, but is attested only in group 4. Nor is the overlapping ever so full as the bars imply. Thus group 4 begins with reverse 33, followed next by 63. Except for the single die 33, the overlap between group 3 (maximum reverse 67) and group 4 (minimum reverse 63) is very slight, whereas the table gives the impression of considerable joint use of reverse dies or of the same range of reverse dies.

TABLE III

(from Hersh, NL 1952, p. 66)



of die consumption appears to have been. But the obverse dies are more likely to have been locked in their anvils, and 21 anvils are hard to conceive.¹³ In any case the die charts themselves suggest sequential production by alphabetical order through each symbol group. This cannot be proved in detail, and there may well have been some irregularity in the ordering of the obverse dies. But one indication of general alphabetization can be found easily in the catalogue, where obverse letters are arranged by reverse numerical order. It is simple to express the letters numerically, taking A=1, B=2, etc., and casting an average. If there had been a die box of 21 *turtle* dies, A–X, to be matched at random with the available reverses, the obverse letters would fall patternlessly within the symbol group, and that appears at a glance to be the case. But it is not the case at all. Under *turtle*, for example, the first seven obverse dies, from E=5, average H=8, whereas the other seven dies, from P=15, average O=14. That is, within the symbol group the earlier letters alphabetically occur with the earlier reverse numbers.

The same calculation can easily be made for all the symbol groups. Omitting groups 0 and 25, which have only one obverse die each, and groups 9 and 20 which appear to be incomplete, there are 21 groups all of which share this characteristic: the letters of the first half of the symbol group in the catalogue, struck with lower numbers, average earlier in the alphabet than those of the second half with higher numbers.¹⁴

In a few cases a larger group can be further refined: dividing the list of group 2. *fulmen* into four parts, we find the obverse letters to average, (1) D=4, with reverses numbered 1–20, (2) F=6, with reverses 30–47, (3) L=11, with reverses 50–65, and (4) R=17 with reverses 68–77. This is clear evidence that the obverse dies of a single group were not a-

¹³ The denarii of D. Silanus with obverse letter and reverse numeral (Syd. 646, Cr. 337/3) were struck, so Crawford believes (*RRC*, p. 587) at 22 anvils simultaneously; and the denarii of C. Allius Bala at 21. These are the highest simultaneous anvil totals adumbrated by Crawford, though the gigantic issue of L. Piso Frugi might be thought to have employed even more.

¹⁴ This is true even of group 5. *grasshopper*. The engraver accidentally omitted the letter of one obverse die, but the sequence of obverse letters holds no matter what value is assigned to that die.

TABLE IV

Average of Reverse Die Numbers per Group

Symbol Group	Average Reverse Die Number	Difference between Averages
0. <i>no letter</i>	5	
1. <i>no symbol</i>	14.50	9.50
2. fulmen	42.32	27.82
3. feather	41.13	— 1.19
4. wheat ear	82.93	41.80
5. grasshopper	81.64	— 1.29
6. grapes	110.36	28.72
7. ivy leaf	127.91	17.55
8. flower	158.67	30.76
9. thyrsus	164.54	5.87
10. bird	201.96	37.42
11. poppy	194.09	— 7.87
12. lizard	245.90	51.81
13. crescent	252.57	6.67
14. bidens	297.08	44.51
15. ear	304.74	7.66
16. star	350.18	45.44
17. branch	335.54	— 14.64
18. staff	382.25	46.71
19. cornucopia	404.19	21.94
20. altar	422.75	18.56
21. turtle	443.21	20.46
22. wing	465.63	22.42
23. shell	479.25	13.62
24. palm branch	498.38	19.13
25. barley grain	497.00	

available simultaneously, but that they, like the numbered reverse dies, were fed into production seriatim.

If, then, the individual group consumed obverse and reverse dies serially, it might be assumed *a fortiori* that the whole sequence of Crepusius's denarii was a simple linear progression through the several groups, as Hersh did by implication, in referring to the symbols as "sequence marks." But the situation is more complicated, as another calculation reveals. Each successive symbol group was apparently struck from still later reverse dies. If, therefore, instead of arranging the symbol series by the lowest numbered reverse die of each, we use the average of all the die numbers per symbol group, we ought to get a similarly rising index number. The results of this calculation are shown in Table IV, "Average Reverse Die Number." At a glance the figures seem to parallel Hersh's in general, rising from the beginning of the series to the end.

But the glance can mislead. What is more important here is the last column, which indicates the distance between the averages of successive groups. Here the results are quite remarkable. Some of the differences are in the negative; i.e., the average of the reverse die numbers of, for example, 5. *grasshopper* is actually lower than that of 4. *wheat ear*, even though both the minimum reverse die number and the maximum are higher for 5 than for 4. In spite of minimum and maximum the general range of reverse die numbers was lower for 5. *grasshopper*. This is not to argue that Hersh's arrangement should be changed, but to point out that it has another meaning. For not only are there several negative numbers in the last column, but all the numbers from the beginning through group 18 form an evident zigzag pattern with alternating high and low numbers. Beginning with the difference between groups 0 and 1, no alternate number (9.50, -1.19, -1.29 etc.) rises higher than 17.55 and the average of the nine alternate differences from 0/1 through 16/17 is 2.47. Beginning with the difference between groups 1 and 2, no alternate number (27.82, 41.80, 28.72, etc.) falls lower than 27.82, and the average of these nine alternate differences from 1/2 through 17/18 is 39.44.

In other words, the average reverse die number struck to group 1. *no symbol* as against 0. *no letter*, or to group 3. *feather* as against 2. *fulmen*, or to group 5. *grasshopper* as against 4. *wheat ear*, etc., is on the

whole 2.5 digits higher in the second case than the first. For all practical purposes these pairs of groups were struck from the same numerical range of reverse dies. This is not true for the opposing pairs: the average reverse die number struck to group 2 as against 1, to 4 as against 3, etc., is on the whole some 39 digits higher in the second case than the first. These pairs of groups were struck from different ranges of the reverse dies. Thus the symbol groups were not struck one after the other, as Hersch implies. Up to group 18 they were struck in pairs. There were two anvils, or two sets of anvils simultaneously in operation, and one symbol group being produced at each. The joint production would not have been exactly parallel chronologically, for when one group was completed at Anvil I (i.e., all the dies A through X had been consumed) another was begun at the same anvil even though the group being struck at Anvil II was still in process. Thus groups 6. *grapes* and 8. *flower* were struck in that sequence at Anvil I with hardly any overlapping of the reverse dies; whereas the range of reverses of 7. *ivy leaf* struck at Anvil II is entirely overlapped first by 6 and then by 8. The two anvils produced first 6 and 7 respectively, then 8 and 7. (See Table VI).

The picture of two anvils or anvil sets in simultaneous operation suggests the possibility of a division in the mint's coining labors, i.e., of two officinae. Two divisions of one officina seems much more likely. For one thing the reverse dies appear to have been used indiscriminately between symbols as long as they lasted, indicating that there was in this regard no operational distinction between anvils.¹⁵

With group 18, however, there is a change. It follows group 17 naturally, but group 19 was not struck with it, for the dies of the latter average 22 digits higher than those of 18. Indeed each successive group to the end shows a higher range of reverse dies than its predecessor, on the average 19 numbers higher. Now we have estimated that some 519 reverses were produced to be struck with some 24 symbol series (that is, nos. 1-24 inclusive, groups 0 and 25 containing only one obverse die each), of which two seem to have been incomplete and can be counted

¹⁵ Crawford speaks of two workshops in 82 B.C., but does not indicate the evidence. For the implication that the joint issue was struck either prior to or parallel with Crepusius's, see below, p. 90 ff.

as totalling a single series; so that 23 series consumed 519 reverse dies, or about 23 dies each. This is persuasively close to the average of 19 by which the average reverse number advances in each group after 18. *staff*, and is also close to the average of 21 between the reverse number of simultaneously produced symbol groups, 2.47, and of consecutively produced symbol groups, 39.44. In other words, 19 is just in the range of reverse die consumption which we would expect in the consecutive production of single groups. Beginning with group 18. *staff*, therefore, Crepusius's denarii were struck at only one anvil.

THE ENGRAVERS

The dual progression of symbol series in Crepusius's denarii has already been discussed, but there is one additional aspect of it. When these denarii are arranged by style of the obverse, it is evident that two engravers were responsible for the dies. These alone produced ca. 479 obverse dies which we extrapolate for the issue, and did so entirely by hand: there is no evidence for hubbing, and good evidence against it in the varying sizes of the heads. The one engraver, whom I designate F, the engraver of the *Fine* style, produced heads characterized by their frequent relatively small size, with eye turned up, fine close eyebrow, scanty hair to neck, characteristic curl pushed back at neck, chin curving up and wreath of narrow leaves usually without berries (PLATE XI, 2). The engraver of the *Gross* style, G, cut heads with a horizontal eye, higher eyebrow, heavy locks of hair on neck, horizontal chin line, and a wreath of thicker leaves with berries (PLATE XI, 3). (I suspect that two hands, whether or not the same two, can be perceived in the reverse dies, but these are much more difficult to disentangle.)

These two engravers cut not only for Crepusius; they produced all or virtually all of the obverse dies of the year (there may just possibly be a third hand at work for Limetanus), and we can distinguish their work throughout. In the joint issues F's heads are often smaller than G's, and although they are veiled, the same distinction can be made in the work about the eyes as on Crepusius's dies (PLATE XI, 4 (F), 5 (G)). Censorinus's Apollo obverses show just the differing characteristics noted above for Crepusius, though F's heads in this series show rather heavier

hair upon the neck (PLATE XI, 6(F), 7(G)). Finally, both cut for Limetanus (PLATE XI, 8(F), 9(G)).¹⁶

Now the identification of these two engravers has consequences for the question of the organization of Crepusius's striking, for it is evident that each controlled his own obverse symbols. All the *fulmen* dies, A–X (presumably), were cut by G, all the *feather* dies were cut by F. In series 1, where the obverse is marked only by a letter, both engravers contributed and may more or less have alternated, although the different obverses which I have actually been able to see total 10 dies for F, 4 for G (Table V). The symbols attributable to each are, for F: feather, grasshopper, grapes, flower, bird, lizard, bidens, branch, staff, altar, turtle, shell, barley grain; for G: fulmen, wheat ear, ivy leaf, thyrsus, poppy head, crescent, ear, star, cornucopia, wing, palm branch. One might ruminare, with more imaginative flight than certainty, that the choice of symbols reflects the personality of the engraver, F producing largely agricultural and pastoral motifs, G largely divine attributes.¹⁷

Be that as it may (and it must be said that among the few symbols on Censorinus's denarii are repetitions of some of Crepusius's, but cut by the other engraver), the groups of symbols do mark out something else. It is now clear that F and G each produced individual symbol series of dies for his own set of anvils. The reverse die averages show that groups 3. *feather* (F) and 2. *fulmen* (G) were struck simultaneously, then 5(F) and 4(G) then 7(F) and 6(G). How evenly, or with what overlapping this was done, it is not possible to say. It would be dangerous to argue that there were two sets of anvils in operation because two engravers were cutting the dies, though that is not impossible. But at least their production was not simply employed haphazardly by the mint, but was conceived as an integrated part of a carefully articulated minting process.

F and G were obviously experienced engravers, and their hands can be seen in other years. By way of example, six or seven years previous F had, I believe, been cutting dies for Vibius Pansa, for whom several engravers of the most diverse quality produced quantities of dies. Hersh

¹⁶ The identification of the two artists as engravers of Limetanus's dies is further evidence against his relegation by Sydenham to a provincial mint.

¹⁷ On control marks as engravers' devices see Crawford *RRC*, pp. 585–87.

TABLE V

Crepusius — Engravers of Obverse Dies

	no letter	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	V	X
0. <i>no letter</i>	F																					
1. <i>no symbol</i>		F	G	F	F		F	G	F		F			F	F		F		F		G	G
2. fulmen	G																					
3. feather	F																					
4. wheat ear	G																					
5. grasshopper	F																					
6. grapes	F																					
7. ivy leaf	G																					
8. flower	F																					
9. thyrsus	G																					
10. bird	F																					
11. poppy	G																					
12. lizard	F																					
13. crescent	G																					
14. bidens	F																					
15. ear	G																					
16. star	G																					
17. branch	F																					
18. staff	F																					
19. cornucopia	G																					
20. altar	F																					
21. turtle	F																					
22. wing	G																					
23. shell	F																					
24. palm branch	G																					
25. barley grain	F																					

identified five. Whether G was among them I do not know, but F appears to be identifiable (PLATE XI, 10). Several years later the denarii of Mn. Fonteius, attributed by Crawford to 85 B.C., were cut by both F and G (PLATE XI, 11(F), 12(G)). The tremendous stylistic differences between the two versions of the Apollo head is owing entirely to their different artistic personalities. In the same year (or in 83 B.C. following Sydenham), came the enormous issue of Julius Bursio, again

cut by F and G (and perhaps others?) (PLATE XI, 13(F), 14(G)); and then in 82 we are back to Crepusius. Nor did their career end here. In 79 they cut two types for Postumius Albinus, with obverses of Diana and Hispania, but their operation was in this case a new departure, for F cut all the Diana dies, and G all the Hispania (PLATE XI, 15(F), 16(G)). They must therefore have been cutting the two types simultaneously, which only makes sense if the dies were being consumed simultaneously: this is another example, therefore, of the two-anvil system of coinage, operating for one moneyer but in this case producing two types at once.

Nor are these the only instances in which our engravers surface. Bahrfeldt noted of the denarii of Q. Titus, "Wie verschieden die Darstellung des Bacchuskopf auf diesem Denare ist . . . Es ist eine auffallende Erscheinung, dass wir auf einer Reihe von Denare denselben Kopf bald gross, bald klein finden; ich bin nicht in Stande eine Erklärung dafür zu geben, doch bin ich überzeugt dass dafür ein bestimmter Grund bestanden hat."¹⁸ As his plates show, the distinction is not simply one of size but of style: the large head was cut by G, and small by F. Bahrfeldt goes on to list issues of 11 other moneyers in which he has perceived large and small heads. These date down into the 40s B.C. and most are too late to have anything to do with our engravers, representing rather another pair or pairs of such workmen cutting dies side by side in the mint. For the most part these differences in style have been ignored by subsequent scholars, but when perceived have sometimes been misinterpreted. Thus the large and small heads on the denarii of M. Sergius Silus, one of those listed by Bahrfeldt, were taken by Sydenham as evidence for dividing the issue between two mints (Syd. 534, 544), when in fact they merely represent two engravers' styles.

THE ORDER OF CREPUSIUS'S COINAGE — II

We have seen that the control marks of Crepusius's denarii can be used to prove that he struck most of his coins at two anvils, while but one anvil was used from group 18 onward; that the two anvils

¹⁸ NZ 1900, p. 82.

correspond to the die production of two engravers, and therefore limit the locus of the obverse dies of a given symbol group; that contrarily the reverse dies passed back and forth between anvils. All of these conclusions permit the elaboration of a diagrammatic representation of Crepusius's coinage in Table VI. Here the obverse symbol groups are arranged horizontally by anvil, vertically by succession. The totals of reverse dies shared between groups is indicated by connecting lines (e.g., groups 3. *feather* and 2. *fulmen* share four reverses, nos. 6, 44, 45 and 58). I omit groups 0. *no letter* and 1. *letter*, since their position is impossible to determine. It cannot be that they were struck at the two anvils respectively, since the former group includes only 1 obverse die, the latter as many as 21. I think it most likely that the distinction between engravers which obtained from groups 2 and 3 onward also was observed here. The Fine dies would have been struck at Anvil I, namely 0, 1-A, C, D, F, H, K, N, O, Q, and S; while the Gross dies would have been struck at Anvil II, namely 1-B, G, V and X. Four additional obverses of group 1 have been attested, but they cannot be assigned to one anvil or the other because their style is not known to me.

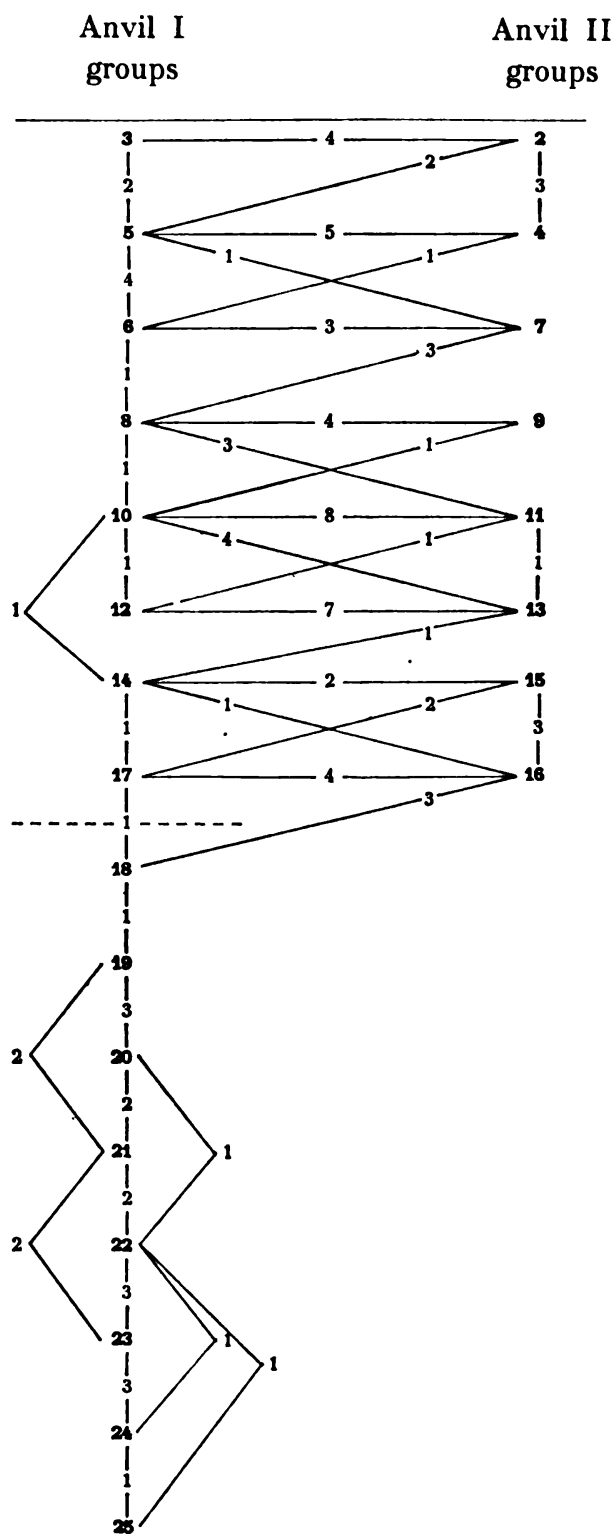
Table VI presents this much information in a form which allows the construction of a theoretical system. In a perfect two-anvil world, each symbol group would be of the same size as every other, each die would have the same life span and produce exactly as many coins as every other. The simultaneously-employed groups would go out of use at exactly the same moment, and two new groups would be simultaneously introduced. In such a scheme the shared reverse dies would behave in regular ways:

- I. *Reverse dies shared horizontally*, between simultaneous groups, would be
 - A) randomly selected from the body of reverses available at any given moment; and
 - B) randomly struck to whatever obverses were currently in the anvils.

It follows that in these cases

- A) the control numbers of the shared reverse dies should on average approximate the average control number of the group in which they are found; and

TABLE VI
Totals of Common Reverse Dies Between Groups



B) the control letters of the obverses with which the shared reverses are mated should approximate the median/mean of the obverse letter series, which is always $L=11$.

II. *Reverse dies shared vertically*, between successive groups (regardless of the anvil, since reverses are shared between anvils) would be

- A) the later dies in use with the obverse group from which they survive, and the earlier dies in use with the obverse group to which they are passed on;
- B) similarly, since both obverse and reverse dies were fed into the system bit by bit (for throughout Crepusius's coinage earlier letters and lower numbers tend to precede later letters and higher numbers in every group), the shared reverse dies would have been mated with later letters in the earlier group in which they are struck, with earlier letters in the later group.

It follows that in these cases

- A) the control numbers of the shared reverse dies would average higher than the average of all reverses in the first group of striking, since they will have been the later dies in use, and average lower than the average of all reverses in the second group of striking, since they will have been in use relatively early;
- B) similarly, the control letters of the obverses with which the shared reverses are struck will be later than average in the alphabet in the first group, and earlier than average in the second group.

When this theoretical pattern is applied to the data epitomized in Table VI, the results are clear and remarkably consistent, and they confirm the layout of the table.

- I. A) We take the shared reverses in the horizontal, and average their control numbers against the average of all control numbers per group; and against the average of all control numbers in groups 2 through 17. For example,

Group	3 ↔ 2		5 ↔ 4	
avg. of shared				
reverses	38	38	82	82
avg. of all				
reverses	41	42	82	83

The shared reverses tend to average near the average of all reverses per group; that is confirmation that they were a random selection from the reverses available in the course of striking each group. When the horizontally-shared reverses of all groups are averaged against all reverses of the same groups, the results are: average control mark of shared reverses, 182; average control mark of all reverses, 187. The two figures are persuasively close.

B) Similarly, the obverse letters with which the shared reverses were mated can be averaged by enumerating them, A=1, B=2, ... X=21. As above we cast an average for all obverse dies found at either anvil in conjunction with reverses shared with a simultaneous group at the other anvil. The results are at Anvil I, M=12 at Anvil II, K=10; at the two anvils taken together, L=11, precisely the median/mean of all letters. Therefore obverses at one anvil which shared reverses with obverses at the other in simultaneous groups are themselves randomly distributed. At any time in the coinage process any reverse die could travel back and forth between the anvils.

- II. A) We take the shared reverses in the vertical, and average their control numbers against the averages of all control numbers of the groups within which they occur. For example,

Group	3 → 5		2 → 5	
avg. of shared				
reverses	55	55	62	62
avg. of all				
reverses	41	82	42	82

In accordance with the theoretical pattern, the shared reverses tend to average higher than the average of all reverses in the first group of the pair in which they appear (i.e., they came later in the group),

and lower in the second (i.e., they came early in the group). Table VI includes a total of 35 vertical pairings of groups through the sharing of reverse dies, that is 70 single instances in which the average of the shared reverses can be set against the average of all reverses per group. In all but 4 of the 70 cases the shared reverses average higher in the first group of the pair, lower in the second.

Over the entire coinage the vertically shared reverse dies average 15 digits higher in the first group of the pair, and 22 digits lower in the second group. This too fits with the theoretical pattern.

B) Similarly, the obverse letters with which the shared reverses are mated should average alphabetically late in the first group of the pair, early in the second group. When an average is cast for these obverses through the entire coinage, the mean obverse letter of the first group of the pair is $N=13$, the mean of the second $G=7$. As theoretically projected above, the reverse dies shared vertically tended to fall with the later letters of the first group in which they were used, with the earlier letters of the second.

I argued above that striking of two groups simultaneously ceased from group 18 onward, basing the argument on the fact that the distance between the averages of the control numbers for groups 18, 19, 20, etc. corresponded to the distance observed between successive rather than parallel groups. Further evidence is here: if we cast the averages of the obverse letters mated with shared reverses in groups 18 through 25, the results are almost identical with the results obtained above for the whole body of vertical sharing: $O=14$ for the obverse dies of the first group in the pair, $G=7$ for the dies of the second. The reverses were therefore shared vertically, and the groups were struck successively, not in parallel.

All of these calculations therefore bring the scheme of Table VI into accord with the theoretical projection, and prove that this was in fact the order of Crepusius's coinage.

THE EXTENT OF CREPUSIUS'S COINAGE

A total of 479 obverse dies is very plausible; the reverse dies are themselves numbered, and run from 1 to 519. Not every one of these has been attested, but there is no reason to doubt that this many were cut, if not a few more. The latest perhaps are yet to be discovered; some toward the end of the series perhaps were never used (under the law that the mint normally has more dies available than coins to strike); some may have broken so early as to have been effectively unused. But for our purposes 479 obverses and 519 reverses seems reasonable for Crepusius.

Tables I and II provide a heartening commentary on these totals from the point of view of our scholarship. Even in dealing with a mint which over the years cut dies by the thousands, in a case such as ours where each die is easily identifiable by its control marks we have identified coins from 66 percent of the dies. And this figure is conservative, for it is based largely on Hersh's original list which was not intended to provide a corpus of the coins of Crepusius. For his purposes Hersh did not include coins whose reading was incomplete even when they presented a new reverse number or new obverse symbol/letter combination. In spite of this limitation, his list, supplemented in the catalogue here published, has revealed the existence of coins struck from two-thirds of the original dies. Obviously a wider investigation would discover more. Not only does this augur well for a study of Crepusius, but it also suggests that studies of the Republican denarii in general which are based on a thorough examination of the material in public and private collections can be expected to cover a substantial majority of the original dies, even if the number of coins surviving is only a tiny fraction of the original issue.

Dies were of course cut and coins struck as well for Crepusius's two colleagues and for the joint issue. This last also bears numbered reverse dies to a known maximum of 151; but the obverses bear no control marks at all, and of the hundreds of dies of Limetanus and Censorinus, only about three dozen can be distinguished by a particular mark. How then to determine the extent of die production in 82 B.C. beyond Crepusius's issue? Crawford provides die estimates throughout *RRC*, based on specific die counts for a few issues and extrapolations from these by way of coin survival rates in the hoards for the greater number of

issues. The method has its difficulties, the major of which for 82 B.C. is that it is far too conservative. For example Crawford gives 296 reverse dies to Crepusius where we have the series running from 1 to 519, for the reason that he knows of only 296 reverse dies (Hersh's original list and his own additions). That is, his count of 296 is a guaranteed minimum, although it appears to be presented in *RRC* as a final total. In the catalogue, 344 of Crepusius's reverses are attested. So too the obverses, where Crawford counts 283 dies, but 321 are catalogued here. Again in the joint issue, Crawford's theoretical calculation of the total of reverse dies is only 62, even though preserved examples are numbered from 1 to 151 and of these Hersh, as he informs me, has up to now verified 99. Thus I prefer to assume, as stated above, that Crepusius's reverse dies represent a rational sequence, and that 479, plus 519, if not exact, are far closer to the original die production figures than the count of numbers which we happen to have seen.

As to Crepusius's colleagues, Crawford is again, I believe, too conservative. I assume that die longevity would be about the same through the course of coin production for the year, that production would therefore tend to be constant, and that coin survival of the joint and individual issues would also be proportionally the same. Any calculations based on this assumption are of course tentative. Still the matter is worth pursuing, to show how divergent our results can be. The putative obverse and reverse dies of the four issues, as given by Crawford in *RRC* and as calculated by me, are as follows: under Buttrey, the dies of Crepusius are as indicated above; the reverses of the joint issue are as indicated above, the obverses calculated from them to give the same proportion as the Crepusius obverses and reverses; the dies of the other two issues are an extrapolation from the joint issue survivals in the hoards listed in Crawford's *RRCH*.

	Crawford		Buttrey	
	<i>obv.</i>	<i>rev.</i>	<i>obv.</i>	<i>rev.</i>
joint issue	56	62	139	151
Crepusius	283	296	479	519
Limetanus	100	111	128	139
Censorinus	218	245	460	501
	657	714	1,206	1,310

In short, if we take seriously the die symbols as indication of extent of issue, and if we allow the proportion of coins found to reflect the proportion of dies cut, the result is a die production of ca. 2,500 units for the issues of the college, a total which is approximately double Crawford's estimate.

At an estimate of 320 working days in the year (there can hardly have been more), there were on average 3.75 obverse dies and 4 reverse dies cut and consumed each day. At this rate the Crepusius issue would have been struck in 125–130 working days, or 21–22 weeks at a 6-day week. Two symbols would have been struck simultaneously at two anvils, each consuming about 2 die pairs each day. At a rate of 25 denarii struck per minute, a 12 hour day would produce ca. 9,000 pieces per anvil or 4,500 per die pair, rather under Sellwood's suggested range,¹⁹ for a total of ca. 2.25 or 2.3 million coins signed by Crepusius. The total coinage for all four issues would then fall somewhere near 5.75 million pieces.

To arrive at the ca. 10,000 pieces per die pair achieved by Sellwood, Crepusius's striking period would have to be lengthened, or more anvils used. If his coins were produced over the entire year at the rate suggested above, this limited number of dies could have struck as many denarii as I proposed for the entire college, ca. 5.75 million pieces. In that case the die pair average would run to 11,500, a persuasive approximation of Sellwood's result. The difficulty is that if Crepusius struck during the entire working year his colleagues would have to have struck simultaneously. One normally assumes the contrary, noting for example the number of colleges in which only some of the moneyers actually produced coin. And there is some matter to support the view in 82 B.C.: the variations in control mark usage among the four issues; the extent and complexity of the die work; the unequal quantity of die and coin production per moneyer; the evident flan variations from issue to issue—including dumpy for the joint issue, serrate for Limetanus.

There is, however, one piece of evidence to the contrary in Crepusius's own coinage. As we have seen, the two anvil system is attested by the reverse dies, the average of whose numeration per symbol group shows

¹⁹ D. G. Sellwood, "Some Experiments in Greek Minting Technique," *NC* 1963, pp. 217–31.

that this parallelism actually holds only through groups 16 and 17. From group 18 Crepusius was striking only at the one anvil.

What then was struck at the other? Only one other of the issues of 82 B.C. followed Crepusius's use of the invariably numbered reverse die, and that was the joint issue. It fits precisely into this corner of Crepusius's activity. While the six and a half groups 18 through 24 were being struck at Anvil I, the joint issue was being produced at Anvil II. The six and a half groups were struck from dies numbered 353 to 519, a total of 167 dies; the joint issue is known to have been struck from 151. Whether this provides evidence of Crepusius's primacy in the college can be argued. The joint coinage used his scheme in the reverse numeration, but followed the majority of Censorinus's coinage in leaving the obverse unmarked, and it is in fact Censorinus who signs the obverse of the joint issue. Still, the fact that the joint issue was, apparently, tucked away into a corner of Crepusius's own might be taken as evidence of his primacy in the college.

At any rate the position of the joint issue raises questions about its significance in terms of the total coinage of 82 B.C. As to die production, the simultaneity of the two issues implies that the engravers, both of whom cut for both issues, either cut many more dies than were immediately needed for the one issue, then cut for the other, or simultaneously cut for both.

THE CONTROL MARKS

	<i>obv.</i>	<i>rev.</i>
joint	—	number
Limetanus	letter (repeated dies)	—
Crepusius	—	number
	letter	number
	symbol and letter	number
Censorinus	—	—
	—	letter ²⁰
	—	number
	symbol	number
	symbol	letter
	symbol	—

The four issues of 82 all bear control marks in whole or in part, to a total of 11 systems. Not only are these systems not identical, they are not even commensurate with each other. Limetanus's several dies bearing the same letter cannot convey the same information as the dies of his colleagues whose symbols, letters and numbers are each limited to one die. Only one obverse die of Crepusius lacks the letter or symbol and letter; the omission is itself a die indicator. Yet the great majority of Censorinus's dies, both obverse and reverse, are without control marks. We have often asked whether such marks had to do with the manufacture of the dies themselves, with the coins produced from these dies, with the anvils, the officinae, the quantity of metal to be struck, the source, the time period—or indeed had nothing to do with minting at all but “occasionally served other purposes, such as propaganda or even advertisement” (Sydenham, p. xxxi). We must at least conclude that it would have been quite impossible for any die out of context to convey anything by way of its control mark, since so many systems were simultaneously in use.

These systems, I believe, cannot all (or any?) have originated with the engravers, given their disparity, but represent a moneyer's decision. That is not to say that they had nothing to do with the engraving: Crepusius's system makes the identification of the individual dies of his issue certain, but that is not the case for any of the other issues of 82. And Crepusius's symbols serve as well to identify the engraver, as we have seen. Yet there exists the notion that the differing systems of control marks which we find as we survey the Republican coinages reveal a kind of intellectual development. Thus Hersh, who pictured the moneyers struggling with the problem of die organization (or mint organization by means of dies), says “during the 80's the mint authorities were trying to improvise a method to control the emission of very large issues”—and ultimately failing—“the problem was one which never was completely solved, and in the end sequence marks were discontinued and individual moneyer's issues were made smaller.” (p. 55). Now

²⁰ Not in Crawford; notice has been supplied to me by Hersh.

whatever it is you are trying to do with your control marks, it is in fact very easy to do. What is difficult to accept is the notion that the issues of money by the state were deliberately limited because the masters of the mint were not able to keep their dies straight. Hersh's association of the die markings with the extent and complexity of the emissions is not necessary, and indeed it supposes that the markings on the *face* of the die, where they could be transferred to the coin, were all that were ever used. But the fact that a coin bears no control mark does not mean that its dies bore no control mark. Its haft could have been covered with marks, engraved or painted. One cannot imagine that generations of Roman moneyers tore their hair over the problem, how to distinguish one of their dies from another, or how to distribute the production in the mint intelligibly, until N. Fabius Pictor had an illumination and engraved letters on the faces of his dies. As to Crepusius's dies specifically, no deep purpose in the marks is evident. Crawford suggests, "Only with the issues of L. Iulius Bursio and P. Crepusius do we find traces of really intelligent attempts to control the use of obverse and reverse dies *in relation to each other*," (*RRC*, p. 588, italics mine). Since Crepusius's obverse letters or symbol-letter combinations are each unique to the die, as are the reverse numbers, the marks provide an easy identification of the individual die for bookkeeping, and a cumulative check on die production. But I see nothing in this material to suggest that the *relation* of obverse and reverse dies in the striking is of any account. For that one would need evidence of manipulation, such as the recutting of a mark, or the specific limitation of certain obverses to certain reverses. On the contrary the picture seems to be simply of sequential use of obverse dies on the one hand, reverse dies on the other, with random transfer of reverses between obverse anvils.

Crawford continues, "The most carefully designed system of control-marks is that of P. Crepusius . . . on the obverse the letters of the Latin alphabet were used in turn first with no symbol and then with each of twenty three different symbols. This type of obverse control mark is slightly different from that of L. Iulius Bursio"—where several dies were cut for each symbol without differentiating letter—"but follows naturally from it. Instead of the same symbol being used and replaced when necessary throughout the issue, all the dies with the same symbol

were used in a group over only a small part of the total sequence. But several groups were always current at any one time. With a number of obverse dies being thus succeeded not just by any new obverse die, but by an *individually designed replacement*, a fairly careful check must have been kept on the *correlation of obverse and reverse die use*" (*RRC*, p. 588, italics mine).

Again I see nothing to support the notion of correlation. The replacement of the obverse symbol die "when necessary" may have been a feature of Bursio's coinage; it would be good to know where the necessity lay, that is, what the symbol was intended to convey or to control. But it does not follow that Crepusius's symbols functioned in the same way, as two pieces of evidence show. First, replacement of Bursio's original symbol die would have been random, as it was worn out, or as other dies with the same symbol were needed to strike that part of the coinage; but replacement of Crepusius's symbol dies is neatly regular, for the normal use is clearly the cutting of each successive symbol with each of the 21 letters of the Latin alphabet. The cutting of the letters within the symbol group is presumably serial, for what else makes sense? —and we have seen evidence above that the use of the dies by letter was also serial. It cannot be that in Crepusius's coinage the dies of a single symbol were intended to replace or adjoin the original die of that symbol only as necessary; the systematic regularity of their cutting and use rules that out. Second, if the symbol as such had a meaning in the coin production its absence from group 1. *no symbol* would be inexplicable. For group 1 is in no way separable from the other groups; it is struck in the same system but happens to be early.

I think the difficulty here is conceptual, and is caused partly by the analogy of Crepusius's issue to Bursio's, where the analogy does not hold. It is clear that Crepusius's reverse dies were marked sequentially in their engraving, from 1 to 519. The obverse dies were marked sequentially with letters. But whereas the reverse numbers could have continued to infinity, the obverse letters can only run A to X, a total of 21. To go beyond that requires some sort of differentiation, and that is what the symbol provides: it makes possible infinite repetition of the alphabetic series. If we conceive, not that the letters subdivide the dies of the symbol group, but that each symbol provides an umbrella for a

21-letter sequence, the simplicity and clarity of Crepusius's system emerges. Both obverses and reverses were marked sequentially, the former with letters, the latter with numbers. Symbols were added to the obverses to make continuous litteration possible. Since application of these marks to the dies is part of the engraving, and each die is marked differently from every other, it is likely that their only function is to differentiate the dies as they were cut, though the fact that the marks are sequential and that the dies apparently were used *grosso modo* in the order of their cutting would have made it possible to note during coin production how many of the dies had been consumed. Neither letter, symbol nor number can convey any other information to us now, nor is there any evidence that in Crepusius's coins they were ever meant to convey any. It might therefore be well in speaking of these adjuncts to the types as "control marks" to avoid the implication that they had to do with anything in the whole complicated process of coin production beyond the simple identification of the body of dies.

There must in fact have been all kinds of control systems which we can never recover, and the control marks on Republican denarii actually provide very little hard information on the total operation of the mint. They are the most superficial reflection of the complexities of a manufacturing operation which was concerned simultaneously with production and with security: the acquisition and inventory of precious metal, the cutting and employment of the dies commensurate with a careful control over their whereabouts and the assurance of their ultimate destruction, the striking of the proper quantity and quality of coins and their issuance without loss on behalf of the state, all of which required established procedures to make an accounting of these activities possible. To these were to be added the ordinary concerns of any manufacturing operation regarding the viability of the plant, number and qualities of workers, salaries to be paid or credited to them or their owners, as well as the record keeping essential in an operation whose overseeing board was replaced each year. All of this could not conceivably have been organized simply on the basis of some letters or symbols engraved on the face of one or more dies, and we put an entirely false value on such control marks if we suppose that they had to do with the essential operations of the mint.

CONCLUSION

The tabulation of the varieties of Crepusius's denarii, based on Hersh's fundamental work, reveals the structure of Crepusius's coinage and its relation to the joint issue. The analogy of the dies of the joint issue, whose reverses also bear serial numbers, and the evidence of relative frequency of occurrence of the coins of Crepusius's colleagues in the hoards, allow an estimate of their die and coin production, and thus an approximate coinage total for the year. The striking is shown to have been based on a two-anvil system, an organization which is particularly confirmed in the issues of Postumius Albinus in 79 B.C. This is good evidence for a kind of organization control in the Republican mint, but not necessarily of deliberate subdivisions into officinae, each with its operational individuality if not autonomy. The integration of the engraver's work into the whole coinage process has been demonstrated, at least for this college of moneyers. The personality of the engravers has begun to emerge, and we find them pursuing their honorable labors over a decade at least (in the case of F), cutting literally hundreds of dies of high quality, never relapsing into the lazy incompetence that characterizes so many of the portraits of Caesar in 44, to take a well-known example. F and G are perhaps the most interesting side of the whole investigation. Their work could doubtless be found elsewhere if one set to look for it, and might be especially useful to study when they are found working on different things. We are still not certain of the composition of many first-century colleges, so that if F could be found cutting exclusively for one moneyer, G for another, that would be presumptive evidence of the moneyers' collegiality.

If in the end we know nothing more of P. Crepusius the man, for there is nothing to be known beyond the evidence of a neat and orderly mind, we can testify to his having left us a control-mark system which is, amid the welter of such systems, the most thorough and lucid of all. Yet it is a system which no one else employed, not even his own colleagues. And that is perhaps the most telling comment on control marks under the Roman Republic.

ADDENDA

Only after the above had been completed was it possible to examine the denarii of Crepusius in the Yale University collection. Among these are seven new combinations, including three new dies.

<i>Symbol</i>	<i>Letter</i>	<i>Number</i>	
5. Grasshopper	(None)	82	
13. Crescent	L	255	
16. Star	H	353	
16. Star	E	396	
18. Hooked Staff	S	317	new obverse die
22. Wing	M	456	new pair of dies

I can also add:

<i>Symbol</i>	<i>Letter</i>	<i>Number</i>	<i>Source</i>
7. Ivy Leaf	N	—	Munich
24. Palm	N	506	Athens hoard
24. Palm	O	—	Athens hoard
—	P	106	Munich
—	L	340	Hamburg

EARLY ANONYMOUS FOLLES FROM ANTIOCH AND THE CHRONOLOGY OF CLASS A

(PLATE XII)

WILLIAM E. METCALF

The extensive excavations conducted by Princeton University at Antiochia ad Orontem from 1932 to 1939 resulted in the recovery of nearly 15,000 coins spanning the period from Alexander the Great to the thirteenth century. Of these, 427 belonged to the "Anonymous" Byzantine series, struck in the late tenth and eleventh centuries and bearing religious types. Though the chronology and sequence of these issues were long a matter of dispute, their relative chronology and approximate *termini* have been established in admirable studies by Bellinger¹ and Thompson.²

There is no doubt that the first of the issues consisted of coppers of the following description:

Obv.: +ΕΜΜΑ ΝΟΒΗΛ around border, inwardly; IC - XC
l. and r. in field.

Bust of Christ facing with nimbus cruciger, wearing tunic and himation, raising r. hand in benediction and holding in l. book of gospels. In arms of nimbus cross, variable ornament; on book, variable ornament; occasionally pellets in upper fields.

Rev.: +ΙΗΣΥΣ / ΧΡΙΣΤΥΣ / ΒΑΣΙΛΕΥ' / ΒΑΣΙΛΕ' in four lines;
above and below, variable marks.

Since Thompson's study of the sequence of the whole Anonymous series, this issue has been called for convenience "Class A." Following

¹ A. R. Bellinger, "The Anonymous Byzantine Bronze Coinage" *ANSNM* 35 (New York, 1928). Previous bibliography, there cited, is of little interest today.

² M. Thompson, *The Athenian Agora II. Coins from the Roman through the Venetian Period* (Princeton, 1954), pp. 109-15.

Bellinger she divided it into two groups: "A-1" of smaller module, "A-2" of larger module. Class A-1 includes only folles with the combination of marks · in nimbus cross, : in book, and nothing above or below the reverse inscription; folles of this class are not infrequently overstruck (PLATE XII, 1-3). Class A-2 consists of folles of varying module and bearing any one of the 66 combinations of marks outlined in Table I;³ they are never overstruck.⁴

These marks are intriguing.⁵ That they are significant from a numismatic point of view is evident from their consistent and systematic combination: only 66 varieties, out of over 5,100 possible on the basis of present evidence, have been recorded. But their interpretation is obscure. Some, notably Grierson,⁶ would see them as sequence marks; others, principally D. M. Metcalf,⁷ as partial evidence for the existence of provincial mints. At present, published hoard evidence is insufficient to indicate any firm chronology; but since the coins are abundant in site finds, the frequency of occurrence of the several varieties at scat-

³ See p. 111; Reproduced from *DOC* III.2, p. 645.

⁴ D. M. Metcalf has described a number of coins from the Corinth Hoard as "restruck," "almost certainly restruck," "probably restruck," etc.; but examination of his plates fails to convince. The only coin which is certainly restruck, no. 1, is unornamented and should be placed in Class A-1. D. M. Metcalf, "Bronze Coinage and City Life in Central Greece circa A.D. 1000," *AnnBSArchAth* 1965, pp. 1-40 pls. 1-4.

⁵ As Philip Grierson has put it (*DOC* II.2, p. 644), "How should these marks be interpreted? There clearly must have been a purpose behind them; it cannot be supposed that the die-sinkers devised them for themselves and used them at random. Equally, however, they represent details of a kind which no central government bureau would concern itself with; the mint must have received instructions to differentiate between its coins in some way, it being left to the mint authorities to decide how best to do it."

⁶ *DOC* III.2, pp. 644-47.

⁷ Metcalf's views are most fully set out in "Interpretation of the Byzantine 'Rex Regnantium' Folles of Class 'A', c. 970-1030," *NC* 1970, pp. 199-219. See also his "Byzantine Coins minted in Central Greece under Basil II," *Nomismatika Chronika* 1974, pp. 21-25; *Coinage in the Balkans 820-1355* (Thessaloniki, 1966), pp. 41-46; "The Byzantine Bronze Coinage in the East Mediterranean World," *Congresso Internazionale di Numismatica*, Roma 11-16 settembre 1961. *Atti* (Rome, 1965), p. 528; "Provincial Issues among the Byzantine Bronze Coinage of the Eleventh Century," *HBN* 1961, pp. 25-32; and "Bronze Coinage," pp. 1-40.

TABLE I
ORNAMENTS ON THE ANONYMOUS FOLLES, CLASS A2

No.	Obverse		Reverse		No.	Obverse		Reverse	
	In Cross	On Book	Above Inscription	Below Inscription		In Cross	On Book	Above Inscription	Below Inscription
1	}	}	- ∞ -	- ∞ -	24b	}	}	.	.
1a			∞	∞	25			- ∙ -	- ∙ -
2	}	}	Nothing	Nothing	26	}	}	∙ ∙ ∙	∙ ∙ ∙
3			Nothing	.	27			∙ ∙ ∙	∙ ∙ ∙
4			.	Nothing	29			- ∙ -	- ∙ -
5			.	.	30	}	}	- ∙ ∙ -	- ∙ ∙ -
6			-	-	31			∙ ∙ ∙	∙ ∙ ∙
6a			- -	- -	32	}	}	+	+
7			- ∙ -	- ∙ -	32a			(?)	(?)
8			∙ ∙	∙ ∙	33	}	}	∞	∞
9			- ∙ -	- ∙ -	33a			∙ ∙ ∙	∙ ∙ ∙
10			∕ ∕ (?)	∕ ∕ (?)	34	}	}	(?)	(?)
11			∕ ∕	∕ ∕	35			- ∙ -	- ∙ -
12			- ∙ -	- ∙ -	36			- ∙ -	- ∙ -
14			- ∙ -	- ∙ -	38			(?)	(?)
14a			- ∙ -	- ∙ -	39			- ∙ -	- ∙ -
14b			∞	∞	40			∞	∞
15			- ∙ ∙ -	- ∙ ∙ -	40a	}	}	∞	∞
15a			- ∙ -	- ∙ -	40b			∞	∞
16			- ∙ -	- ∙ -	41	}	}	∞	∞
16a			- ∙ ∙ -	- ∙ ∙ -	42			(?)	(?)
17			- h -	- h -	42a			∞	∞
18			- R -	- R -	42b	}	}	(?)	(?)
19			- P -	- P -	43			- ∙ -	- ∙ -
19a			- ∙ -	- ∙ -	45	}	}	- ∙ -	- ∙ -
20			Nothing	.	47			∞	∞
21			- ∙ -	- ∙ -	48	}	}	- ∙ -	- ∙ -
22			- ∙ -	- ∙ -	49			- ∙ -	- ∙ -
23			- ∙ -	- ∙ -	50			- ∙ -	- ∙ -
24			∞	∞	51			- ∙ -	- ∙ -
24a			(?)	(?)					

tered sites might help to resolve the question of provincial minting, or of the practice of consigning coins to certain regions at certain periods.

The finds from two important sites, Athens and Corinth, have been published in detail;⁸ but as yet no important site from the East has been analyzed. It is hoped that detailed description of the 165 folles of Class A from Antioch may ultimately help to resolve the controversy over the Anonymous folles of Class A.⁹

CATALOGUE

In the identification of varieties I have assumed that all major variants are now recorded; given the many thousands of pieces which have been examined and studied this seems a reasonable assumption. This implies that in many cases one of the marks has been inferred from certain reading of the other two, most often the mark on the book, which is most susceptible to wear. No piece with an illegible reverse mark has been assigned to a specific variety.

Individual find spots have not been noted, though they are on record at Princeton. None of the coins was found in hoards and since casual losses comprise the bulk of coins found at any site, it is unlikely that association by find spot is of any significance for the numismatist or archaeologist. This is particularly true at Antioch, which was subject to constant disruptions in the two centuries following the issue of the Anonymous folles, and where stratification has been disturbed frequently since.

⁸ The Athens material surveyed by Thompson has been published in greater detail by D. M. Metcalf, "Bronze Coinage," his figures for the Class A folles are employed here, but when comparison is made with later classes, Thompson's figures are employed since revised figures for Classes B, C, etc., have not been published. The Corinth finds were reported by K. M. Edwards, *Corinth VI: The Coins 1896-1929* (Cambridge, 1933), pp. 138ff., nos. 103ff.

⁹ It is a pleasure to acknowledge the help of B. E. Levy, Curator of Coins at the Firestone Library, Princeton University, who first informed me that the coins from Antioch were preserved there and generously made them available for study and publication. The original publication lists 166 coins of Class A; only 165 coins so identified can now be located, and as will be seen in the catalogue two of these are misidentified. D. B. Waage, *Antioch-on-the-Orontes IV.2: Greek, Roman, Byzantine and Crusader Coins* (Princeton, 1952), p. 166, no. 2263.

Coins are listed in the order of varieties devised by Bellinger and augmented by Grierson (see Table I). Within each variety, coins are listed in the order of discovery. Coins with prefix "C" were discovered before 1936, "Ca" in 1937, "Cb" in 1938, "Cc" in 1939. Sizes are given to the nearest millimeter; when two figures are given they represent the minimum and maximum dimensions. Coins were weighed on a triple-beam balance accurate to .05 g.

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
CLASS A-1					
1.	C 3367	27	6.70	↓	Overstruck
CLASS A-2					
<i>Variety 1</i>					
2.	C 3432	22/25	5.10	↓	Clipped
3.	C 6635	27	6.20	↓	Bent, corroded
<i>Variety 2</i>					
4.	C 3348	31	12.85	↓	Book obscure
5.	C 3523	32	11.40	↓	Book obscure
6.	C 6452	28	9.40	↓	Book obscure
<i>Variety 3</i>					
7.	C 3346	31	14.65	↓	Book obscure; large dot
8.	C 3347	31	12.80	↓	Book obscure
9.	C 3356	29	8.60	↓	Book obscure; large dot
10.	C 3405	27	10.15	↓	Book obscure; large dot
11.	C 3480	30	16.50	↓	Book obscure; small dot
12.	C 3499	32	9.60	↓	Book obscure; small dot
13.	C 3500	31	10.00	↓	Nimbus and book obscure
14.	C 3536	35	14.85	↓	Nimbus obscure; small dot
15.	C 3538	27	9.85	↓	Small dot
16.	C 3779	33	7.95	↓	Small rev. die? Small dot

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
17.	C 3849	30/32	12.10	↓	Nimbus and book obscure; large dot.
18.	C 4675	28	11.75	↓	Book obscure; large dot
19.	Ca 59	28	7.95	↓	Nimbus and book obscure
20.	Ca 112	29	8.05	↓	Book obscure
21.	Cb 44	33	12.15	↓	Large dot
22.	Cb 94	31	9.65	↓	Nimbus and book obscure; large dot.
23.	Cb 1284	29	11.60	↓	Nimbus and book obscure; large dot.
<i>Variety 4</i>					
24.	C 5914	30/32	9.70	↓	Book obscure
<i>Variety 5</i>					
25.	C 3358	29	10.70	↓	Nimbus and book obscure
26.	C 3801	29	10.80	↓	Book obscure
27.	Ca 56	29	8.10	↓	Obverse obscure
28.	Ca 268	31	11.85	↓	Book obscure
29.	Ca 440	31	9.75	↓	Book obscure
30.	Ca 1735	30	8.95	↓	Book obscure
31.	Cb 802	31	9.40	↓	Nimbus and book obscure
<i>Variety 6</i>					
32.	C 2756	31	11.95	↓	
<i>Variety 7</i>					
33.	C 3406	29	13.10	↓	Book obscure
34.	Ca 33	32	9.85	↓	Book obscure
<i>Variety 8</i>					
35.	C 1423	31	14.35	↓	Book obscure
36.	C 3355	32	11.90	↓	Nimbus and book obscure
37.	C 3431	32/36	12.90	↓	Nimbus and book obscure
38.	C 3545	31	15.60	↓	Book obscure

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
39.	C 3591	32	14.55	↓	Book obscure
40.	C 3650	30	13.10	↓	Nimbus and book obscure
41.	C 3783	32	15.10	↓	Book obscure
42.	C 5663	31/34	16.85	↓	Book obscure
43.	C 6094	30	12.80	↓	Nimbus and book obscure
44.	Ca 222	34	16.55	↓	Book obscure
45.	Ca 282	35	12.85	↓	Book obscure
46.	Ca 382	32	16.90	↓	
47.	Ca 1899	34	16.25	↙	Book obscure
48.	Ca 1907	33	16.90	↓	
49.	Ca 1939	32	11.85	↘	Book obscure
50.	Ca 3171	33	13.20	—	Obverse obscure
51.	Cc 2157	32	8.65	↓	
<i>Variety 14b</i>					
52.	C 2738	24/27	8.10	↘	
<i>Variety 16a</i>					
53.	Cb 3388	39	18.95	↙	
<i>Variety 23</i>					
54.	C 3460	35	16.05	↓	Book obscure
<i>Variety 24</i>					
55.	C 3065	29	10.75	↓	
56.	C 3363	26	6.90	↓	Much corroded.
57.	Ca 196	28	10.15	↓	
58.	Ca 457	28	8.95	↘	
59.	Ca 1908	27	10.20	↘	Book obscure
<i>Variety 25</i>					
60.	C 3537	33	10.05	↓	Book obscure
61.	C 3549	27/30	11.25	↓	Nimbus and book obscure
<i>Variety 26</i>					
62.	C 3607	32	12.20	↓	
63.	C 3852	31	9.85	↖	Book obscure

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
Variety 27					
64.	C 3616	33	11.55	↓	Nimbus and book obscure
Variety 32					
65.	Ca 116	28	9.35	↓	Book obscure
66.	Ca 1900	30	7.95	↓	
Variety 34					
67.	C 3360	27/30	9.35	↑	Book obscure
68.	C 3523	32	11.40	↓	Book obscure
69.	C 3524	27	8.40	↓	Book obscure
70.	C 4397	32	12.25	↓	Book obscure
71.	Ca 113	34	15.65	↓	Book obscure
Variety 36					
72.	C 2721	32	9.60	↓	Book obscure
Variety 39					
73.	C 3423	28	10.35	↓	Nimbus obscure
74.	C 3531	26	7.60	↓	
75.	C 4568	27	7.35	↓	
76.	Cb 1575	27	8.85	↓	
77.	Cb 2073	27	8.30	↓	
Variety 40					
78.	C 3534	27	7.50	↓	
79.	C 3578	29	11.55	↓	
80.	Ca 1898	28	12.30	↘	
81.	Cc 139	32	13.85	↓	
Variety 40b					
82	Cb 950	28	8.05	↘	
Variety 41					
83	C 3467	26/28	11.75	↓	Book obscure
84.	C 3782	30	11.50	↓	

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
85.	C 3802	29	9.75	↓	Book obscure
86.	C 3837	28	7.20	↓	
87.	C 4641	28	9.70	↓	
88.	C 6083	26/28	14.10	↓	Unusually thick flan
89.	C 6172	29	11.75	↓	
90.	Ca 1904	26	8.85	↓	Book obscure
91.	Cb 2136	28	8.15	↓	
92.	Cb 2551	30	10.35	↓	
<i>Variety 45</i>					
93.	C 6089	30	9.10	↓	
94.	Ca 362	29	10.95	↓	
95.	Ca 3064	31	12.85	↓	
<i>Variety 47</i>					
96.	C 2004	32	9.20	↓	
97.	C 3191	26/29	8.95	↓	
98.	C 3353	31	11.40	↓	
99.	C 3461	29	10.80	↓	
100.	Ca 3146	29	10.95	↓	Book obscure
101.	Cb 359	32	12.15	↓	Book obscure
<i>Variety 48</i>					
102.	C 3781	32	12.65	↓	
<i>Variety 50</i>					
103.	C 3780	28	8.30	↓	Book obscure
104.	C 3851	31/33	11.25	↓	
105.	Ca 185	34	13.35	↓	
<i>Variety 51</i>					
106.	C 3463	31	9.30	↓	Book obscure
UNCERTAIN					
<i>Variety 3 or 5 (dot below rev. inscription)</i>					
107.	C 3602	27	9.60	↓	
108.	C 3822	28	7.25	↓	

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
109.	Ca 1903	31	12.40	↓	
110.	Cb 616	30	7.75	↓	
<i>Variety 12 or 21 (book obscure)</i>					
111.	C 3563	33	12.20	↓	
112.	Ca 1905	32	11.45	↓	
113.	Cb 1743	30	11.30	↓	
<i>Variety 14 or 22 (book obscure)</i>					
114.	C 2801	26	6.15	↓	
115.	C 6097	28	9.00	↓	
116.	Cb 2985	32	9.55	↓	
117.	Cb 3426	25	6.25	↓	
<i>Varieties 39-40b</i>					
118.	C 307	29	8.65	↓	Nimbus and book obscure
119.	C 3388	28	8.20	↓	⋈ in nimbus
120.	C 3395	30	8.75	↓	Book obscure
121.	C 3407	27	5.95	↓	Book obscure
122.	C 3497	32	12.20	↓	Book obscure
123.	Ca 490	27	7.30	↓	Nimbus and book obscure
124.	Ca 3187	25	8.00	↓	⋈ in nimbus
125.	Cb 760	14/28	2.85	↓	Broken and corroded
126.	Cc 2982	23	6.80	↓	Book off flan; cut down
<i>Variety obscure</i>					
127.	C 1464a	27	3.30	↓	Much corroded; •• in nimbus
128.	C 1757	28	6.95	↓	
129.	C 2174	27	13.55	↓	⋈ in nimbus
130.	C 2772	28	11.85	↓	Perhaps dot below rev. inscription.
131.	C 3067	30	12.30	—	
132.	C 3430	28	10.80	↓	• on book.
133.	C 3464	35	18.75	↓	⋈ in nimbus

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
134.	C 3498	27	6.75	↓	— * — on rev. (var. 12, 21 or 34)
135.	C 3511	33	14.45	↓	Pierced
136.	C 3518	30	9.75	—	
137.	C 3522	30	11.00	—	
138.	C 3606	28	9.35	↓	• • in nimbus, • in book
139.	C 3678	32	8.35	—	
140.	C 3925	31	8.45	↓ or ↘	Double struck; — C — or — • — below rev. inscription
141.	C 3962	33	13.95	↓	
142.	C 6550	29	11.20	↘	∴ in nimbus.
143.	Ca 103	29	8.95	↓	∴ on book
144.	Ca 111	29	7.15	—	Central dot on rev.
145.	Ca 143	33	12.95	—	
146.	Ca 333	31	9.00	—	
147.	Ca 543	30	9.75	↓	
148.	Ca 786	30	9.65	↓	
149.	Ca 916	20	3.30	—	Clipped and corroded
150.	Ca 1906	31	11.00	↓	
151.	Ca 1935	29	9.35	↓	
152.	Ca 2275	33	12.70	↓	Much corroded
153.	Ca 3170	32	16.15	↓	
154.	Cb 117	31	14.05	↓	
155.	Cb 2068	34	12.05	↓	
156.	Cb 2158	27	5.55	↓	
157.	Cb 2341	32.	14.15	↓	— * — on rev. (var. 12, 21 or 34)
158.	Cb 2431	29	6.90	↓	
159.	Cb 2819	13	15.55	↓	
160.	Cb 4074	30	9.75	↓	
161.	Cb 4137	28	8.45	↓	
162.	Cb 4540	29	10.80	↓	
163.	Cc 2279	32	12.30	↓	

<i>Sequence no.</i>	<i>Antioch no.</i>	<i>Size</i>	<i>Weight</i>	<i>Axis</i>	<i>Remarks</i>
<i>Misidentified</i>					
164.	Cb 76	20/30	6.00	↓	Anonymous Class D
165.	Cb 2658	26	3.95	—	Obv. obscure; probably Anonymous Class D

COMMENTARY

D. M. Metcalf, who has studied this coinage more extensively than anyone else, has divided the folles of Class A into nine groups.¹⁰ On the basis of his classification the Antioch finds break down as follows:

TABLE II

<i>Group</i>	<i>Cat. nos.</i>	<i>Total</i>	<i>Percent of legible examples</i>
i) Class A-1	1	1	0.8
ii) Vars. 1, 6, 10-19, 21-23, 36-38, 48-50. ("Metropolitan")	2-3, 32, 52-54, 72, 102-5, 111-17	18	14.3
iii) Var. 2-5, 7-9, 20 ("Central Greek")	4-31, 33-51, 107-10	51	40.5
iv) Vars. 24, 33, 39-40	55-59, 73-82, 118-26	24	19.0
v) Vars. 25-28 ("provincial")	60-64	5	4.0
vi) Vars. 29, 29/41, 43-47	83-101	19	15.1
vii) Var. 34 ("provincial")	67-71	5	4.0
viii) Vars. 31-32	65-66	2	1.6
ix) Var. 51	106	1	0.8

¹⁰ Metcalf, "Folles," pp. 202-4.

These percentages (rounded for purposes of the following Table) may usefully be compared with the corresponding figures from Corinth, Athens, and Southeast Turkey:¹¹

TABLE III

<i>Group</i>	<i>Corinth</i>	<i>Athens</i>	<i>Southeast Turkey</i>	<i>Antioch</i>
i	23	18	2	1
ii	6	4	10	14
iii	54	61	18	41
iv	6	8	26	19
v	3	2	3	4
vi	3	4	32	15
vii	3	1	1	4
viii	1	1	5	2
ix	not given	not given	0	1

Dramatic differences in the representation of the several groups at Athens and Corinth on the one hand and Southeast Turkey on the other led Metcalf to make several important attributions. But it will be seen at once that, although there are general similarities between the statistics for Southeast Turkey and those for Antioch, it is also true that Antioch differs far less from Athens and Corinth in the composition of its currency. It is therefore worth examining, group by group, some of Metcalf's attributions. Group i is reserved for later discussion.

Group ii ("metropolitan"). The varieties which comprise this group are ill-represented at Athens and Corinth, but occur with somewhat greater frequency in eastern Anatolia. To this extent finds from Antioch

¹¹ Metcalf, "Folles," p. 204. The figures from Corinth are Metcalf's, based on study of over 2,500 specimens. The "Southeast Turkey" coins were part of a lot, which passed through the hands of Spink and Son, Ltd., in 1966. The scientific value of the lot is questionable: it was said to have been assembled in and around Antioch, but there is no certainty that it represents either a unified group or an unculled one. It is included here because, in part, it provided the basis for some of Metcalf's reattributions; but wherever the Antioch excavations modify the picture of Eastern Anatolian currency their evidence is surely to be preferred.

and Southeast Turkey support a "metropolitan" attribution for these generally fine, heavy folles, since it may be assumed that coins travelled more freely from Constantinople to eastern Anatolia than to mainland Greece.

Group iii ("central Greek"). The Antioch finds raise considerable doubts regarding the correctness of Metcalf's attribution of this group to central Greece. The totals at Athens and Corinth, 54 percent and 61 percent, respectively, were very impressive when set against 18 percent in Southeast Turkey (the only Anatolian evidence available to him in 1970), but are far less striking when compared with 41 percent at Antioch. The central Greek attribution can be sustained only if it is supposed that a mainland mint could have provided so substantial a fraction of Antiochene currency in the late tenth and early eleventh centuries. This is quite out of the question.

Groups iv and vi. Hoards and metrology suggest that these two groups were the latest of Class A, and their introduction has been placed ca. 1020.¹² As Table III shows, they occur in much greater quantities at the eastern Anatolian sites than on the mainland. This discrepancy continues into the immediately subsequent issues, Classes B and C: the two classes are much more common, vis-à-vis Class A, at Antioch and Southeast Turkey than at Athens or Corinth.

TABLE IV

	<i>Corinth</i>		<i>Athens</i>	<i>S.E. Turkey</i>	<i>Antioch</i>
	1896-1929	1929-39			
Class A	825	2,560	623	198	163
Class B	154	527	218	ca. 160	125
Class C	96	not given	154	not given	80

Three possible explanations for this phenomenon come to mind. Perhaps Class A is simply under represented at Antioch, since the ratio of Class B to Class C is very similar to that observed at the mainland sites (see Table IV); this would suggest Antioch's relatively slow re-

¹² Metcalf, "Folles," pp. 207-12.

integration into the Byzantine monetary system after the city's recovery in 969. Perhaps the demand for Byzantine currency, which must have occurred after the city's return to imperial control, continued to be unusually heavy as late as ca. 1050. Or possibly there was some interruption in the flow of money to Greece ca. 1020–50 which depressed the numbers of late Class A and all Class B and C coins at Athens and Corinth.

In the absence of any detailed historical record, it is impossible to be sure which, if any, of these factors account for the significant discrepancies in distribution of groups iv and vi between eastern Anatolia and the mainland. But it must at least be recognized that these discrepancies do not necessarily result from the fact that the currency of the two regions was provided by different mints.

Group v ("provincial"). On the basis of stylistic eccentricities and frequently-blundered legends Metcalf attributed this group to an unspecified provincial mint. But the similarity in proportions at Antioch and southeast Turkey to those observed at Athens and Corinth shows that the varieties were not localized in circulation; the finds do not support Metcalf's case.

Group vii ("provincial"). Once again identical patterns of distribution over widely separated geographical areas lend no support to Metcalf's case for provincial mintage, which is based largely on "illiteracy"—i.e., blundered legends.

Certainly the most remarkable aspect of the distribution of Class A folles at Antioch is the virtual absence of Class A-1: only one¹³ identifiable piece compares with over 18 percent of the legible coins found at Athens, 23 percent of those found at Corinth. This is the more surprising as the striking of Class A-1 is assumed by virtually all scholars to have been coincident with the Byzantine recovery of Antioch, a time at which the influx of new coin ought to have been heavy.

If Antioch stood alone, its evidence might be dismissed as aberrant. But in fact coins of Class A-1 are rare in other Anatolian finds as well.

¹³ Waage, *Antioch*, p. 166, no. 2263, states that "about fifteen of these coins were certainly restruck or double struck and others may have been." But only one is certainly restruck; double striking is so common in this series that it requires no comment.

Twelve coins of Class A were recorded in the first report of the excavations at Sardis; none were of Class A-1.¹⁴ In the second report, only 1 of 28 pieces belonged to Class A-1.¹⁵ Metcalf's lot of 198 coins acquired in southeast Turkey contained only 3 folles of this class (1.5 percent).

Taken alone, these differences in distribution would point to a mainland mint for the A-1 folles. That conclusion is reinforced by the metrology, style, and execution of this class; all three factors set it apart from Class A-2.

Metrology. Many, perhaps most, of the coins of Class A-1 are overstruck; to the extent that they preserve the physical characteristics of their undertypes, they have no independent weight standard at all. Even freshly-struck coins of this class show a tremendous range of weights; the mean seems to fall ca. 7 g.¹⁶ This does not approach the standard of even the lightest varieties of Class A-2, and is less than half the mean of some of the heavier varieties.

Style. As Metcalf has observed, "The style of Class A-1 is homogeneous and distinct;" he might have added that it is distinctly inferior to Class A-2. Portraits are more linear, less plastic; Christ's face is longer and narrower. The nimbus is usually more rounded, and the cross within it is often formed with radial arms. The overall effect of the obverse is far less pleasing.

Execution. Coins of Class A-1 are shoddily overstruck (see PLATE XII, no. 1); coins of Class A-2 are never overstruck. In addition, coins of Class A-1 exhibit a lack of attention to detail. Blunders in lettering and spelling which seldom occur (and then only in isolated groups) in Class A-2 are common on the smaller, overstruck folles.¹⁷

In short, there is nothing other than the type to associate Class A-1 with Class A-2. It is distinct metrologically, stylistically, physically, in its use of overstriking and its lack of reverse ornament. It is found

¹⁴ H. W. Bell, *Sardis*. Publications of the American Society for the Excavation of Sardis XI. *Coins*, pt. I (Leiden, 1916), pp. 97-98, nos. 924-35.

¹⁵ G. E. Bates, *Byzantine Coins*. Archaeological Exploration of Sardis, Monograph 1 (Cambridge, Mass., 1971), p. 129, no. 1150.

¹⁶ Metcalf, "Folles," p. 203.

¹⁷ E.g., DOC A1.1, with-Xh for XR; A1.4 with b.A for bA; and ANS specimens with XRIS4S for XRIST4S (PLATE XII, 2) and bASISE for bASILE (PLATE XII, 3).

in large quantities on the Greek mainland but almost never in Anatolia. All the evidence now available points to a mainland Greek origin for this class.¹⁸ This has important chronological implications, since it is inconceivable that the anonymous series was introduced in Greece. The traditional chronology, which places Class A-1 at the head of the Anonymous series, will not withstand scrutiny.

The introduction of what we know as the Class A folles is recorded by Cedrenus, who quotes from Scylitzes:¹⁹

And he (sc. John I) commanded the likeness of the Saviour to be engraved on the nomisma and the obol, which was not done before this. And Greek letters were engraved on the other side to about this purport, "Jesus Christ, King of Kings." And the kings who succeeded him did the same.

Scylitzes is unequivocal: the introduction of Class A is firmly placed in the reign of John I Tzimisces, although Bellinger showed that the text does not support assignment to the year 972 as Wroth believed. The massive numbers in which Class A was struck suggested to Bellinger that the series must have continued beyond Tzimisces's death in 976, and he argued that the series continued through the reigns of Basil II, Constantine VIII, and Romanus III, i.e., until 1034. This view commended itself to subsequent scholars, though Grierson followed Morrisson in arguing that type changes within the Anonymous series need not coincide with changes of emperor. But in general he concurred with Bellinger's estimate of the duration of Class A, and opted for a termination of the series in ca. 1030.²⁰

¹⁸ Two negative arguments may be adduced in support of the non-Anatolian origin of Class A-1. First, though a substantial portion of Class B was overstruck on coins of Class A, none of the undertypes seems to have been of Class A-1. (Ornaments on the undertypes are seldom legible, but weights tell the story: virtually all Class B folles with Class A undertypes are heavier than the heaviest coins of Class A-1.) Secondly, coins of Class A which bear Arab countermarks are uniformly of Class A-2, which suggests that the coins of Class A-1 did not leave the eastern boundaries of the empire and penetrate to the interior.

¹⁹ Cedrenus, vol. 2, pp. 413–14, ed. Bonn, 1839; Bellinger's translation.

²⁰ Bellinger, "Byzantine Coinage," and Thompson, *Agora II*; P. D. Whitting, "The Anonymous Byzantine Bronze," *NC* 1955, pp. 89–98; Grierson, *DOC* III.2, p. 639; C. Morrisson, *Catalogue de monnaies byzantines de la Bibliothèque Nationale* (Paris, 1970), pp. 584–85.

Within Class A, Bellinger perceived three subgroups: one of small size, one intermediate, and one large. Coins of the small group are not infrequently overstruck. These he attributed to John I, for three reasons: their most common undertype belongs to Nicephorus II; they are similar to coins of Nicephorus in fabric and module; and their small lettering resembles that of Nicephorus's coins more closely than does the lettering of either the intermediate or large group of Class A.

This tripartite division has not been adopted by all, but with a single exception²¹ all scholars have agreed that Bellinger correctly identified what is now known as Class A-1—the small, unornamented and frequently overstruck folles—as the issues of John I.

Yet there are grave flaws in the reasoning which led to this conclusion. None of the points raised by Bellinger, and since accepted universally, demonstrates that Class A-1 is the earliest anonymous issue, or that it belongs specifically to the reign of John I.

Let us take first the question of overstriking. There is no denying Nicephorus's coins provided most of the flans for overstruck coins of Class A-1: this is evident from the Agora excavations and can be further documented from any large collection. But this fact provides no more than a *terminus post quem* for the production of Class A-1: it does not (and cannot) fix the date of Class A-1 vis-à-vis Class A-2, since coins of the latter class are never overstruck.

Second, given the number of overstrikes in Class A-1, its similarity in fabric and module to the issues of Nicephorus II has no value as evidence. As we have noted above, an overstruck coin possesses the physical characteristics of its undertype.

Finally, there is the lettering. The reverses of Nicephorus's coppers have in common with coins of Class A the letters A, B, E, H, I, L, R, S, and Y. On both issues B is rendered **b**; E, I, L, R, and S are identical. But the other letters differ markedly (see PLATE XII, 4-7)

A is rendered **A** on Nicephorus's coins, **A** or **Λ** on Class A-1.

H appears in upper case on the coins of Nicephorus, in lower case

²¹ I. Dimlian, "Cîteva descoperiri monetare bizantine pe teritoriul R. P. R." SCN 1957, pp. 189-216.

(h) on coins of Class A-1. The form **h** renders lower case **N** on Nicephorus's coppers.

Y is always **V** on the coins of Nicephorus; it is always **Y** on coins of Class A-1.

In short, at almost every conceivable point of divergence, the letter forms on coins of Class A-1 are different from those employed on the coinage of Nicephorus. There is no positive link between the coinages which supports attribution of the small module anonymous folles to the reign of John I.

Thus far we have considered the evidence of the coins themselves; almost as weighty are considerations of general probability. Scylitzes's mention of the introduction of religious types was intended merely to illustrate the piety of Tzimisces; hence he failed to note other important features of the new coins. They were far heavier than any coins produced since Constantine IV's abortive attempt to restore the weight standard of Justinian; stylistically they surpassed any coppers ever struck at Constantinople; and, alone among the late Byzantine coppers, coins of Class A-2 were never overstruck.

Logically this improvement in standards of execution belongs together with the change of types. If, as has been supposed, the increase in weight implies a revaluation or recoinage, introduction of new types would have been obvious; by the same token the very choice of sacred types would have suggested an improvement in the quality of the coins bearing them.

Where does this leave Class A-1? Logically, it should follow Class A-2, but we are left with no clue to its date more precise than the *termini* provided by the accession of John I in 969 and the end of Class A as a whole ca. 1030. Metrology suggests that the shoddily-executed coins of Class A-1 belong alongside the later, lighter coins of Class A-2; on the other hand their association in site finds with the earlier, heavier coins of Class A-2 has been taken as evidence that they belong early in the series.²² The problem is incapable of resolution in the present state of the evidence; only detailed publication of hoards will permit an advance beyond mere speculation.

²² Metcalf, "Folles," p. 210.

CONCLUSION

The distribution of Anonymous folles of Class A-2 at Antioch is similar to that already observed at Athens and Corinth, but for a somewhat higher representation of D. M. Metcalf's groups iv and vi, which are generally placed late in the series; this may indicate that different economic factors were operating in Greece and eastern Anatolia after ca. 1020. The fact that 41 percent of the identifiable coins found at Antioch were of his Group iii militates against the Central Greek attribution he has proposed; similarly the nearly identical representation of his Groups v and vii at Athens, Corinth and Antioch calls into question his conclusions regarding their provincial origin.

Class A-1 is represented in a single specimen at Antioch; though abundant at Athens and Corinth, coins of this class hardly ever appear in Anatolian contexts. This pattern taken together with the distinctive style, shoddy execution and overstriking of Class A-1 suggests that it was not produced at Constantinople; its numbers at the mainland sites indicate a Greek attribution. Similarities between Class A-1 and the coinage of Nicephorus II are superficial at best, and do not require placing Class A-1 at the head of the Anonymous series; Class A-1 has the same chronological *termini* as Class A-2, i.e. ca. 969-1030.

THE MEROVINGIAN CA COINAGE OF AUSTRASIA

(PLATE XIII)

ALAN M. STAHL

When the Romans extended their authority to the Gallic provinces in the first century B.C., they brought with them elements of centralized administration and control.¹ One aspect of this was a monetary system standardized throughout most of the empire. The Gallic mints of Trier and Lyon minted coins with the same composition and denominations as those in Palestine or in Africa. Five centuries after Caesar, in the course of the fifth century, the centralized authority of Rome lost control over the European provinces. The successor governments were kingdoms with Germanic monarchs; the rule of most of Gaul fell to the Merovingian family of Franks. The new rulers usually claimed to be acting as agents of the Roman emperor, now safely settled in Constantinople. While this claim was little more than a pretense designed to legitimize their rule over former Roman citizens, the early Germanic kings usually sought to maintain Roman institutions to the extent to which they understood them.

Their imitation of the forms of Roman administration with little comprehension of the content is nowhere better illustrated than in their early coinage.² As the Frankish kings established their power and moved away from simple imitation of Roman models in governing their realms, they issued coins which were no longer merely copies of the

¹ This paper is the result of research begun at the summer seminar of the American Numismatic Society. I would like to thank the staff of the Society, especially Jeremiah Brady, for their assistance and advice. I would also like to express my appreciation for the cooperation offered by the following people: Mm. Lafaurie and Duplessy of the Bibliothèque Nationale; M. Collot and Mlle. Clermont of the Musées de Metz; and MeJ. van der Poel of the Museum van Middelburg. All coins illustrated are in the ANS collection.

² For a survey of late Roman and early Germanic coinage see Pierre LeGentilhomme, "Le Monnayage et la circulation monétaire dans les royaumes barbares en occident," *RN* 1943, pp. 45-112, and 1944, pp. 13-64.

earlier Roman coinage Chlotar II, king of various parts of Gaul from 584 to 628, issued coins bearing the obverse legend CLOTANRIVS REX (PLATE XIII, 1). The dies for this coin are better engraved than previous, purely imitative coinage with few letter reversals and a finer modelling of the bust figure. The reverse legend reads VIITORIA CLOTARI. The lower limb of the cross is intersected by two steps, and there is a globe directly beneath it. Flanking the cross, in the field, are two registers of letters: on the first line VI to l. and VA to r., and on the second V and II. The first line may be an indication of the city of Viviers as mint. The VII of the second line is probably an imitation of the same letters appearing in the reverse field of some Roman coins, indicating seven siliquae or carats, the weight of a tremissis. The type is surrounded by a circle of pearls.

Coins bearing a royal name are unusual among the issues of Merovingian France; more typical is the coin illustrated on PLATE XIII, 2. This coin bears no indication of a governmental minting authority but rather the name of a place on the obverse and of a minter on the reverse. The obverse type is still the Roman diademed bust, executed with varying degrees of skill. It is the style of the diadem, of its knot, and of the clothing of the bust which have often served as the basis for the classification and chronology of this type of coin. The obverse legend is partially off flan for this coin, but from other specimens it can be reconstructed as CABILLONO FIT — made in Cabillonus, that is Chalon-sur-Saône in Burgundy.³ There are hundreds of place names which appear on Merovingian coins, often followed by the word *fil*, as here, or the barbarism *fitur*. On many coins the place name is followed by a word indicating the nature of the place. Thus we find *civitas*, which may designate either the subdivision of a Roman province or the capital city of that region; *vicus*, a village; *mallus*, a word of presumed Germanic origin indicating a judicial meeting place; *villa*, presumably designating a private estate; and *castrum*, a military camp. The nouns on the obverse are usually in the ablative case, which may be an indication either of location or of agent.

³ A. Belfort, *Description générale des monnaies mérovingiennes*, vol. 1 (Paris, 1892), no. 1200.

The reverse type of such coins is usually a variation of the Roman cross reverse, with a combination of cross, steps, globes and wreath. In the field are often two initials, which may indicate the minting place; on our coin, the C and A correspond to Cabillono, the *civitas* identified on the obverse. The legend of this coin (again reconstructed) bears the names of two men, Bonefacius and Wintrio. Both of these names are known from other coins of Chalon, where they are followed by the word *monetario*, minter.

A similar coin (PLATE XIII, 3) has on the obverse MEITS, for *Mettis* (Metz), CIVETAT. The reverse bears the legend GOECIIVS MONET and a Latin cross flanked by the letters C and A within a wreath. On the basis of the CA, coins such as this have usually been considered imitations of the coinage of Chalon-sur-Saône. A closer examination, however, of the CA coins of the Meuse and Moselle valleys (present day Lorraine and the heart of the Frankish kingdom of Austrasia) reveals that rather than being imitations of coins of Chalon, these Austrasian coins show clear differences from the Chalon coins and have a great deal of internal consistency.

Coins of only three minters of Austrasia (Theudelenus, Walfechramnus and Domegiselus) bear the same reverse types as those on coins of Chalon: cross above a combination of steps and globes, flanked by the letters C and A. All of these three minters also produced coins with what I shall term the "simple" Austrasian CA reverse type: Latin cross flanked by the letters C and A in a wreath or circle of triangles.⁴ This simple reverse, with no steps or globes, appears on no known coins of Chalon. The bust on the Metz coin, although poorly executed, is of typically Austrasian style, generally corresponding to the simple CA reverse type. The diadem is completely pearled (as is the hair on occasion), the neck is a detached rectangle, and the torso is a trapezoid bearing symmetrical decoration. None of these attributes is typical of the busts on the coins of Chalon. While it is extremely rare to find

⁴ There are further Austrasian coins with CA on the reverse which have such additions to the simple type of cross within wreath as dots and additional letters. I consider these coins variations on the simple type and shall not include them in this study of the basic group itself. Nor shall I include coins bearing letters other than CA or its mirror reversal AC; AA, AV, and CC could be derived from other letter combinations such as MA, VII or *alpha omega*.

the C and A reversed on coins of Chalon, on Austrasian coins mirror reversal is found in the fields of almost one-third of the coins.

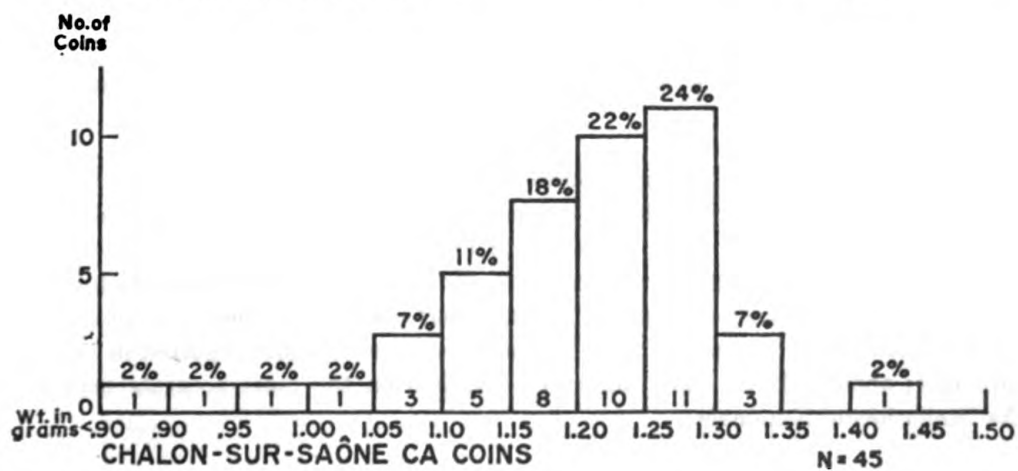
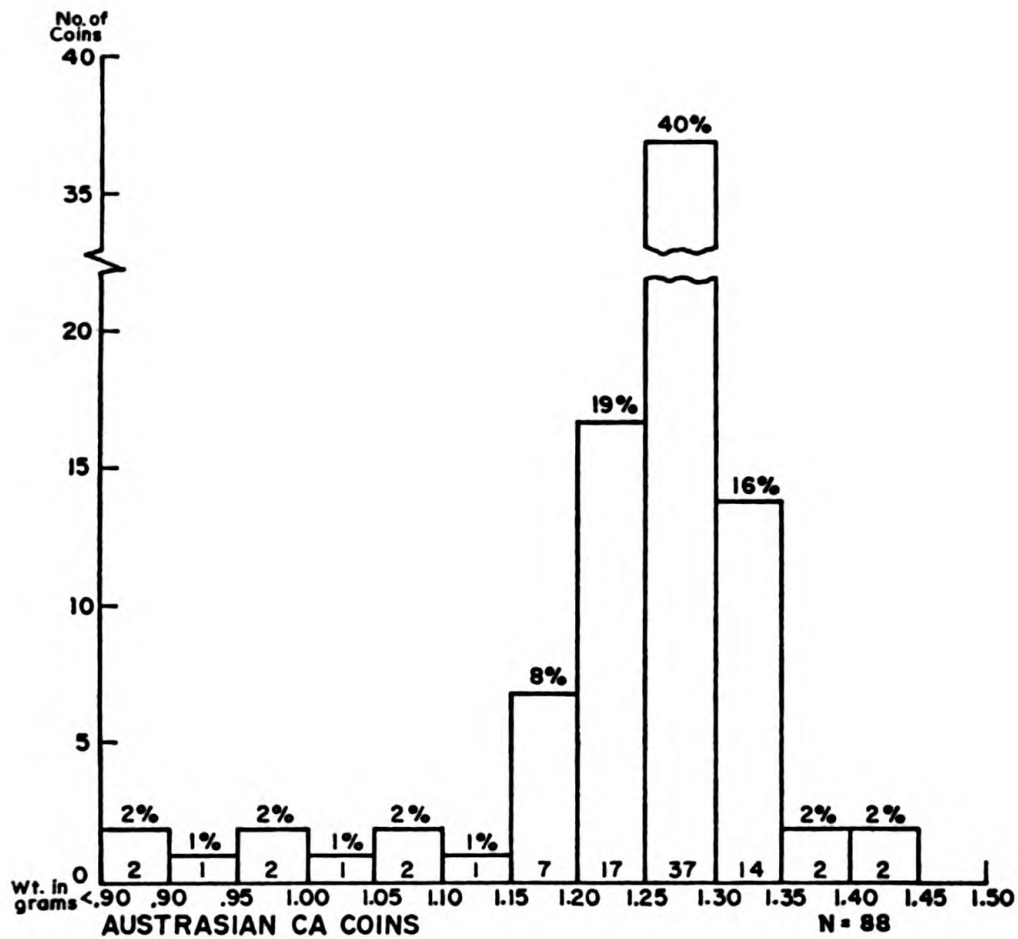
The simple CA reverse type appears on 100 different coins of Austrasia, bearing the names of 40 minters and 18 legible place names, of which 8 can be identified with certainty: Metz, Verdun, Toul, Dieulouard, Vic, Moyenvic, Marsal and Dieuze. All fall within the late Roman province of Belgica I, comprised of the *civitates* of Metz, Verdun, Toul and Trier; most are in the region of Metz. As only 22 of the 100 coin types survive in more than one specimen, it is probable that there were more types minted than are known today. There are three minters whose names appear on the coins of more than one minting place within the group; such links among these mints may prove to have been even more common as further coins are discovered and reported. The two known die links within the group are between coins bearing the same place names and minter (Metz-Ansoaldus and Metz-Theudelenus).

The assumption that the Austrasian CA coins were imitations of those of Chalon has led previous commentators to a reconstruction of a trade network from the Mediterranean, through Chalon, into the Frankish heartland of the Meuse and Moselle valleys.⁵ An examination of the actual locations of finds of Chalon and Austrasian coins suggests a different picture. On the map the find spots of Chalon coins are indicated by crosses.⁶ It will be noted that they are located chiefly within Burgundy and in southwest France. No Chalon coins have been reported for the valleys of the Rhine, the Moselle or the Meuse, nor along the coast of the North Sea. The find spots for the Austrasian CA coins (circles on the map) are limited to northeast France, the Netherlands, Germany and England. Only in the Crondall hoard in southern England do these two distributions overlap. There is thus no indication on the basis of finds that Chalon coins were common currency within Austrasia or within its commercial sphere.

⁵ LeGentilhomme, "Monnayage," p. 25.

⁶ The distribution of finds of Merovingian coins of Chalon is derived from the "Table provisoire" of Jean Lafaurie, "Les Routes commerciales indiquées par les trésors et trouvailles monétaires mérovingiennes," *Moneta e scambi nell'alto medioevo* (Spoleto, 1961), p. 273. The locations and literature for all Austrasian CA coins found in context are given in the Appendix below.

TABLE I
Comparison of Weight Distributions



In Table I a metrological comparison is made of the CA marked coins of Austrasia with those of Chalon.⁷ While the total number of coins (especially those of Chalon) is too low for sophisticated statistical analysis, it is apparent that the CA coinage shows at least as much homogeneity as that of Chalon. More than 70 percent of the coins of both groups fall between 1.15 and 1.34 g., but the coins of Austrasia show a greater concentration (40 percent) in the 1.25–1.29 range than those of Chalon (24 percent) and have a higher mean weight (1.22 g as compared with 1.16). Making allowances for the limited number of specimens and possible systematic differences in preservation and reporting, we are still permitted to note that the Austrasian coins appear to have been minted on a stricter standard than those of Chalon. This observation argues further against viewing these Austrasian coins as occasional imitations of a popular currency.

In view of their stylistic unity, the restricted range of minting sites, the links among the mints, the limited area of distribution and the relatively high metrological standards, the Austrasian CA coins merit consideration as a separate series. The Austrasian type was probably originally derived from a Chalon model, but it developed quickly into an independent coinage. The CA itself is the only indication these coins bear of this model.

The most important fact to ascertain about this series is, of course, its chronology. There are few royal issues among Merovingian coins, and none which are associated with the Austrasian CA reverse type. By general stylistic analogy with royal issues, it is likely that the Austrasian CA coinage (as well as most other minter-signed gold coins) falls between the last decade of the sixth century and the middle of the seventh. One possibility for a closer dating lies in the identification of some of the men whose names appear on the coins as minters.

⁷ In graphing the weights of all reported coins one notes a clustering at the values 1.20, 1.25, and 1.30. This is evidently the result of nineteenth-century determinations made on scales accurate only to .05 g. In making calculations I have therefore excluded weights reported only in the catalogue of Belfort. This accounts for the discrepancy between figures given for total numbers of coins and those used in graphs and analysis. The same clustering is not observable for weights reported in Prou's catalogue; apparently all coins there were weighed on the more accurate scale of the Bibliothèque Nationale.

The status of these men is an open question; they have been variously identified as royal mint officials, local authorities, wealthy individuals coining private supplies of gold, and simply the goldsmiths who engraved the dies and struck the coins.⁸

Of the thousands of names which appear as minters on Merovingian coins, thus far only one has been convincingly identified with an individual known from documentary sources. This is Eligius, or St. Eloi, Bishop of Noyon. Eligius was born in 590 in Limoges and was apprenticed to a goldsmith who directed the "publicam fiscalis monetiae officinam."⁹ Eligius then left Limoges and came to the court of King Chlotar II of Neustria. He remained in the court of Chlotar and of his son Dagobert I and grandson Clovis II and was eventually granted the position of Bishop of Noyon. The minter's name, Eligius, appears on the reverse of coins whose obverse legends bear the names of these same three kings; the identification of this minter's name with that of the goldsmith and courtier is reasonable and widely accepted. This identification, however, is of little value for determining the status of a *monetarius*. Eligius was certainly a royal official, but as a bishop he had his own regional authority. He was, moreover, the possessor of significant personal wealth and, in fact, trained as a goldsmith. His name does not appear on any coins of Austrasia.

To judge from surviving coins, the principal Austrasian minter was Ansoaldus of Metz. We know of 13 different coins of his with the simple CA reverse, of which a total of 18 surviving specimens are reported, the highest totals for any Austrasian minter (see Appendix below, Metz). His coins have been found in the Netherlands, in Germany and in England. The chronicle ascribed to Fredegarius gives the name Ansoaldus for a legate sent by the Frankish king Chlotar in 623 to Charoald, King of the Lombards.¹⁰ A charter of Eligius, in his capacity as Bishop

⁸ A review of evidence and theories is presented in Adolphe Dieudonné, "Les Monétaires mérovingiens," *Bibliothèque de l'École des Chartes* 1942, pp. 20-51.

⁹ "Vita S. Eligii," *Monumenta Germaniae Historiae, Scriptores Rerum Merovingicarum* (hereafter *MGH SRM*) vol. 4, ed. B. Krusch (Hanover, 1902), pp. 634-742; Migne, *Patrologiae Cursus Completus, Series Latina*, vol. 87 (Paris, 1863), cols. 477-594.

¹⁰ *The Fourth Book of the Chronicle of Fredegarius*, ed. J. M. Wallace-Hadrill (London, 1960), p. 42. There is also an Ansoaldus in the *Historia Francorum* of

of Noyon, lists the name Ansoaldus among the witnesses.¹¹ This document is dated November 22, 632, and concerns the grant of a plot of land to the newly founded monastery of Solignac, near Limoges. There is no place of issue given. Of the 22 witnesses, 8 have been identified by the editor as bishops, mostly from Neustria. Only one of the other witnesses has been identified: Chramnolenus, Duke of Besançon. The presence of so many bishops and the identification of an important count lead to the conjecture that this charter was drawn up at the Neustrian court. We would then have a second document identifying Ansoaldus with the court of the King of Neustria. If this man was the same as the Ansoaldus responsible for the coinage of Metz, this minting is best ascribed to the period between 628 and 632, when Dagobert I was king of both Neustria and Austrasia.

Another name which appears on the CA coins of Metz is Godecnus. In a letter written ca. 640–44 to Desiderius, Bishop of Cahors, Abbo, Bishop of Metz, writes of sending “*exemplaria per filio vestro, germano meo Godeno.*”¹² While this reference gives but slight information on the status of Godecnus, it does present us with an individual who was brother to the Bishop of Metz and whose name corresponds to one on the coins of this city. This reference to Godecnus (datable only by the episcopates of the recipient of the correspondents) is from approximately the same period as that inferred for Ansoaldus.

It is apparent that the dating of Merovingian coins through the identification of minters with documents is extremely hypothetical. The length of activity of an individual and the recurrence of the same name in several generations increase the margins of error. The fact that the names of none of the men known to have been important in Austrasia in the early seventh century (e.g. Arnulf, Pippin) appear on any of the coins, should add further caution to this endeavor.

A more usual method for establishing a chronology for undated coins is through an examination of coins found in association with artifacts or in hoards with other coins. The Merovingian period has produced

Gregory of Tours (*MGH SRM*, vol. 1 pt. 1 (Hanover, 1884, repr. 1951) ch. VII, 7 and ch. VIII, 1). This man was active in 585, before the earliest dates suggested for minter-signed coinage.

¹¹ *MGH SRM*, vol. 4, pp. 743–49.

¹² *MGH SRM, Epistolae*, vol. 3, ed. W. Arndt (Berlin, 1892) p. 210.

a wealth of archaeological material in the form of equipped graves, but little that has proved helpful in dating coins. The only finds in context of Austrasian CA coins are in an otherwise unequipped grave in Büttelborn, Germany,¹³ and in an unpublished Merovingian cemetery at Manre, Ardennes.¹⁴

There are only a few hoards which contain minter-signed Merovingian gold coins, and the largest contains only about 40 such coins. While the relative chronology of the important hoards has been generally established, there is still controversy as to their absolute dating. The rare royal (and hence datable) coins that appear in the hoards are of value only for determining a *terminus post quem* for the composition. The most thorough recent discussion of the major hoards has been in two articles by Jean Lafaurie, with proposals for dating based primarily on stylistic criteria.¹⁵ Lafaurie places the Escharen hoard, found in the Netherlands, in the decade around 600. Philip Grierson has suggested a date 15 to 20 years later for it.¹⁶ Lafaurie gives a date of ca. 625 for the coins of the Sutton Hoo ship burial in England, considerably earlier than his own previous estimates. Again Grierson has proposed a later dating. Neither of these hoards contains Austrasian CA coins; Sutton Hoo contains a coin of Metz with a different reverse type. This fact cannot, however, be used in establishing a starting date for the CA series; absence of coins from such small collections is of course indicative of nothing, and it has not been established that only one type of coin was minted at one place at one time.

¹³ Joachim Werner, *Münzdatierte austrasische Grabfunde* (Berlin, 1935), no. M114.

¹⁴ Six coins were discovered in 1962–63 and reported by Jean Lafaurie, "Trouvailles de monnaies mérovingiennes à Manre (Ardennes)," *BSFN* Jan. 1972, pp. 145–47. One grave is believed to have contained four coins, two of which have simple CA reverse types. These coins are almost white, but no reports on specific gravity or other tests of composition have been published for them. They weigh 1.05 and 1.17 g respectively. Another grave contained two coins, one with the simple CA reverse. Again, no tests of composition are reported; the CA coin weighs only 0.68 g. No other grave furnishings are reported, nor has an estimate been given for the dating of the cemetery as a whole.

¹⁵ "Le Trésor d'Escharen (Pays-bas)," *RN* 1959–60, pp. 153–210; "Routes commerciales," pp. 216–78.

¹⁶ See the exchange between Lafaurie and Grierson in *Moneta e scambi*, pp. 326–29.

There are three major hoards which do contain Austrasian CA coins: the St. Aubin hoard from within Austrasia; the Nietap hoard from the Netherlands; and the Crondall hoard from southern England. By a stylistic comparison with royal issues, Lafaurie has placed the St. Aubin hoard in the decade 630–39. On the basis of the lack of certain types of coins and the generally good execution of the engraving, he has assigned a date of 630 to 635 for the Nietap hoard. Although C. H. V. Sutherland proposed a date of ca. 670 for the Crondall hoard as a whole,¹⁷ Lafaurie has given the date of 640 for the Merovingian coins of this mixed English and continental hoard. Thus, primarily on the basis of stylistic comparisons (and not without some challenges), Lafaurie has given dates in the 630 to 640 period for all three hoards which contain Austrasian CA coins.

A less subjective method for determining the chronology of Merovingian coins may lie in an examination of their composition and metrology. In a recent (and as yet only incompletely published) study of royal coins, J. P. C. Kent has determined that the percentage of gold in Merovingian "gold" coins (which are actually an alloy of gold and silver) decreased in the course of the seventh century.¹⁸ This decrease was relatively steady except for the decade 630–39 when, supposedly as the result of an immense tribute from the Visigoths, the gold content of royal coins is represented as having shot up suddenly, only to plunge well below previous levels within the decade. It is not known whether the pattern is the same for non royal coins as these are, of course, undated.

Table II presents a comparison of the gold content of royal coins with that of the major hoards and the Austrasian CA coins.¹⁹ The hoards are arranged in presumed chronological order and, like the royal coins, show a decline in mean gold content over time. The mean gold content (measured by specific gravity determinations) of the coins in

¹⁷ C. H. V. Sutherland, *Anglo-Saxon Gold Coinage in the Light of the Crondall Hoard* (London, 1948), p. 13.

¹⁸ J. P. C. Kent, "Gold Standards of the Merovingian Coinage, A.D. 580–700," *Methods of Chemical Investigation of Ancient Coinage*, ed. E. T. Hall and D. M. Metcalf (London, 1972), pp. 69–74.

¹⁹ W. A. Oddy, "The Analysis of Four Hoards of Merovingian Gold Coins," *Methods of Chemical Investigation*, pp. 111–25; values for the St. Aubin hoard are not available.

TABLE II
Comparison of Gold Content by Specific Gravity

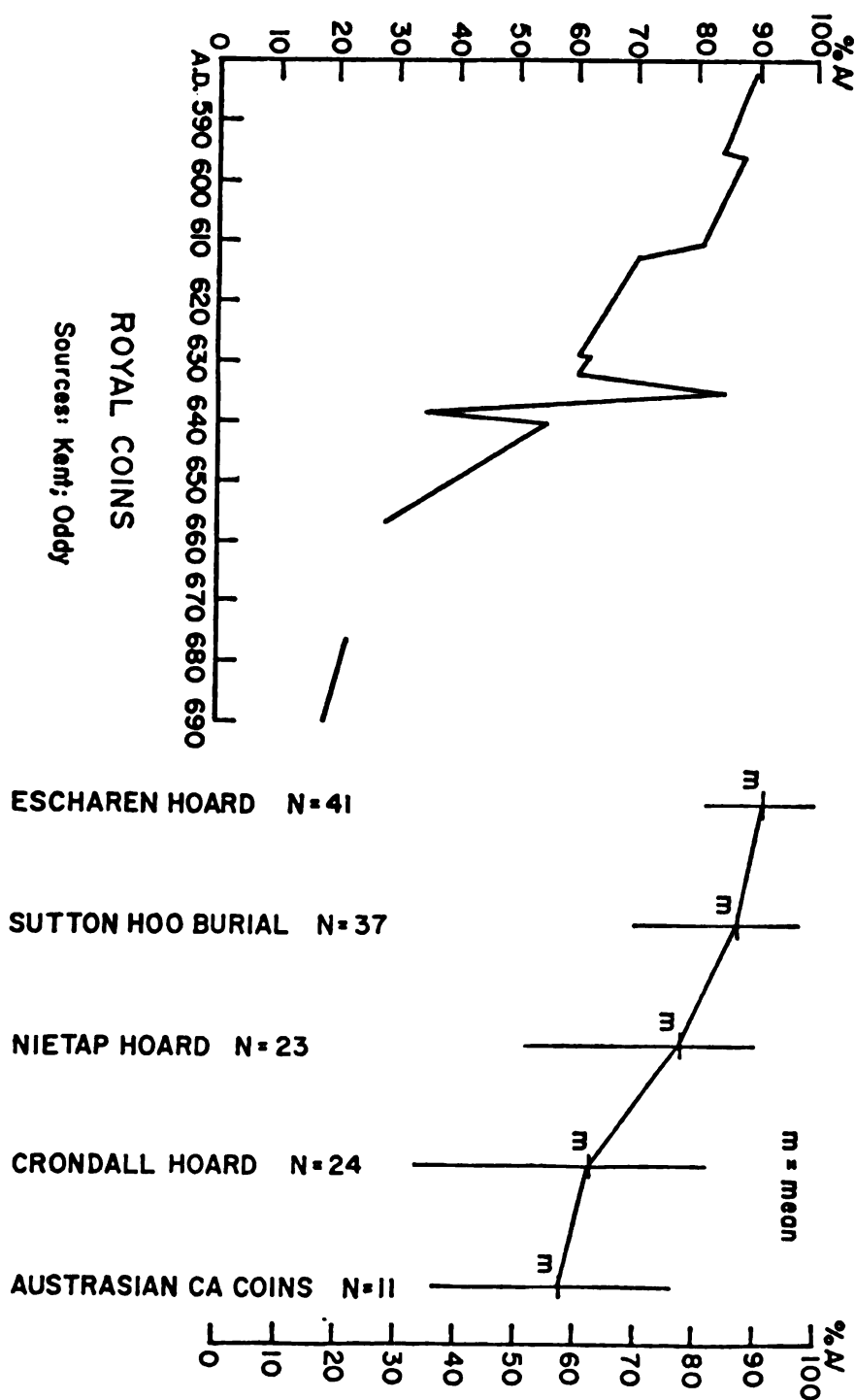
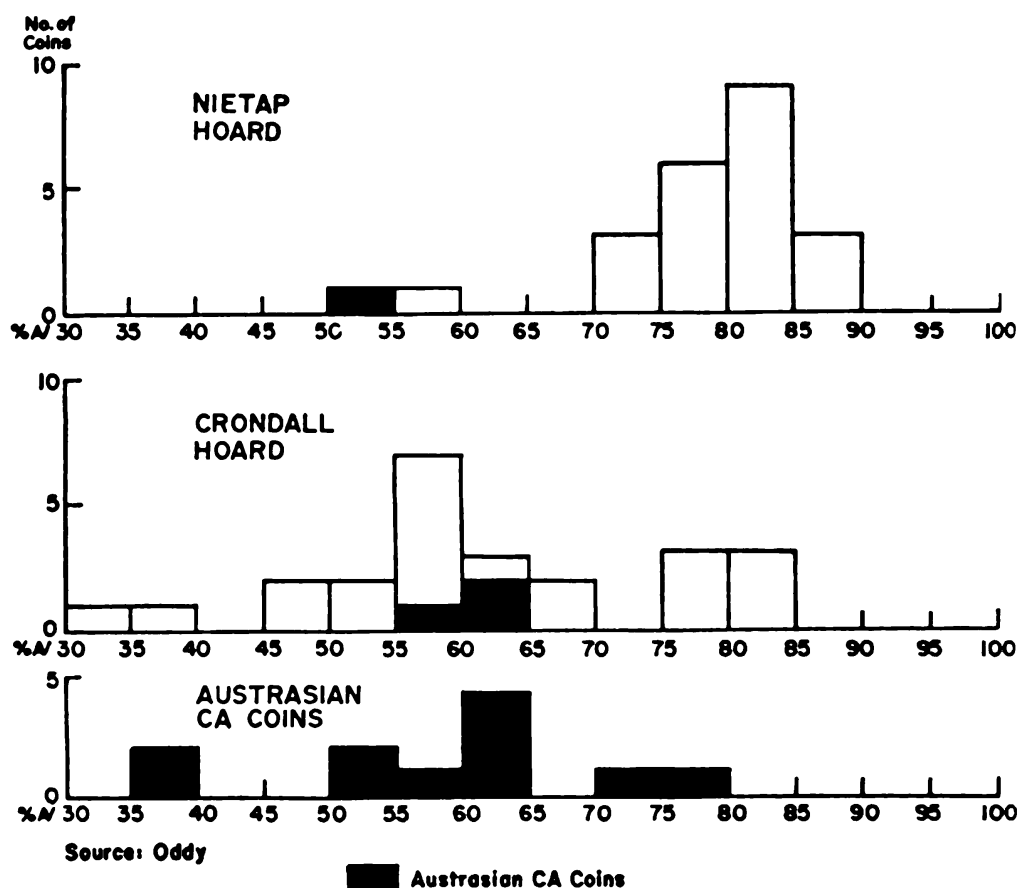


TABLE III
Comparison of Gold Content by Specific Gravity



the Nietap hoard, 76.8 percent and of the Merovingian coins of the Crondall hoard, 61.1 percent, would place them in the period 610–30, assuming non-royal coins do not show the same wild fluctuations as are given for royal ones. This would be the minting date of the average coin in each hoard; the composition of a hoard is determined by its most recent coin. Thus the 630–40 dates proposed for these hoards on the basis of stylistic comparisons are consistent with the evidence from an analysis of their gold content. The relationship of the Austrasian CA coins to these hoards can best be appreciated by examining the bar graphs of Table III. In the Nietap hoard the single Austrasian coin has the lowest gold content; in the presumably later Crondall hoard the Austrasian coins are fairly well distributed. The mean gold content for all measured

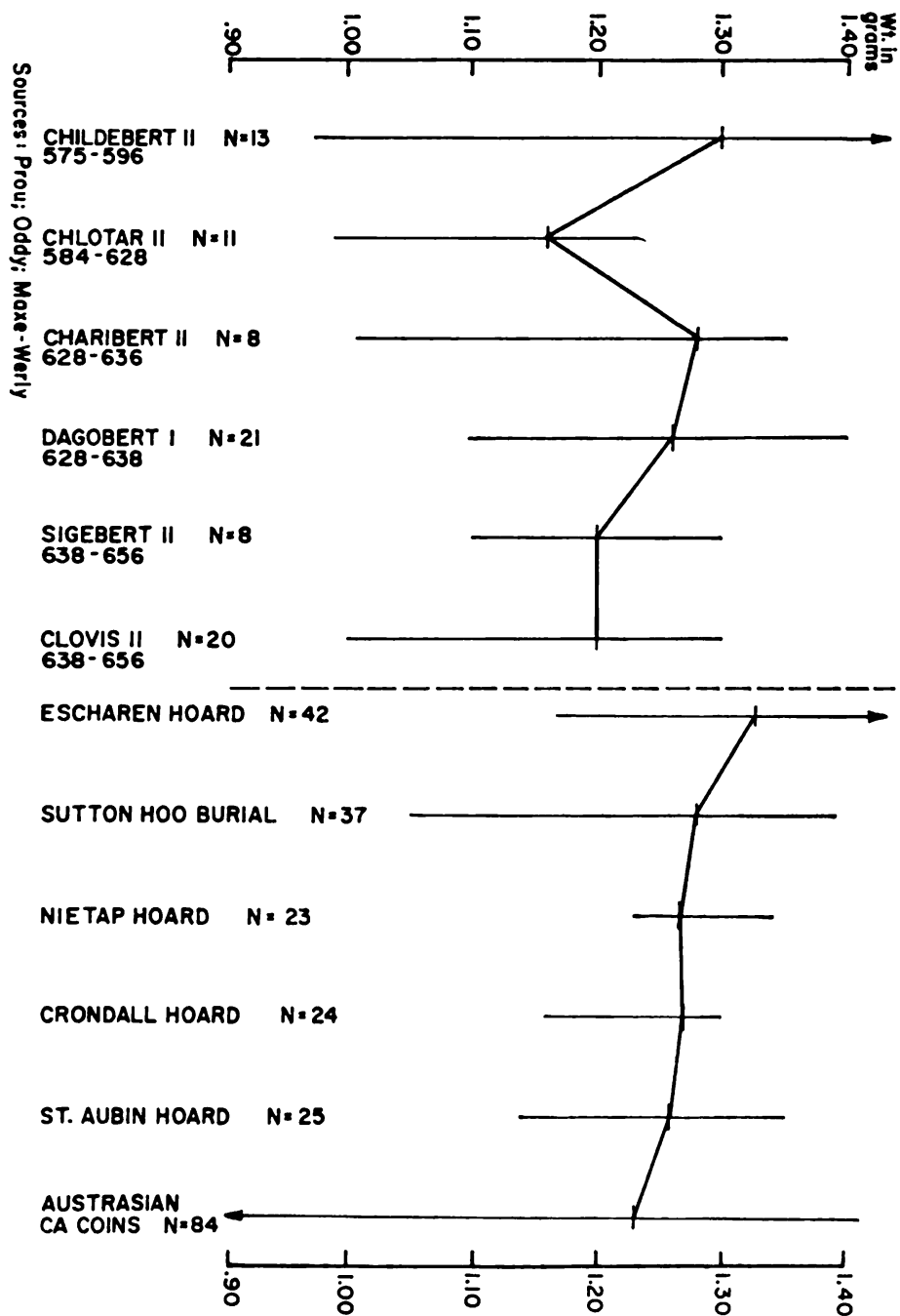


TABLE IV
Comparison of Mean Weights

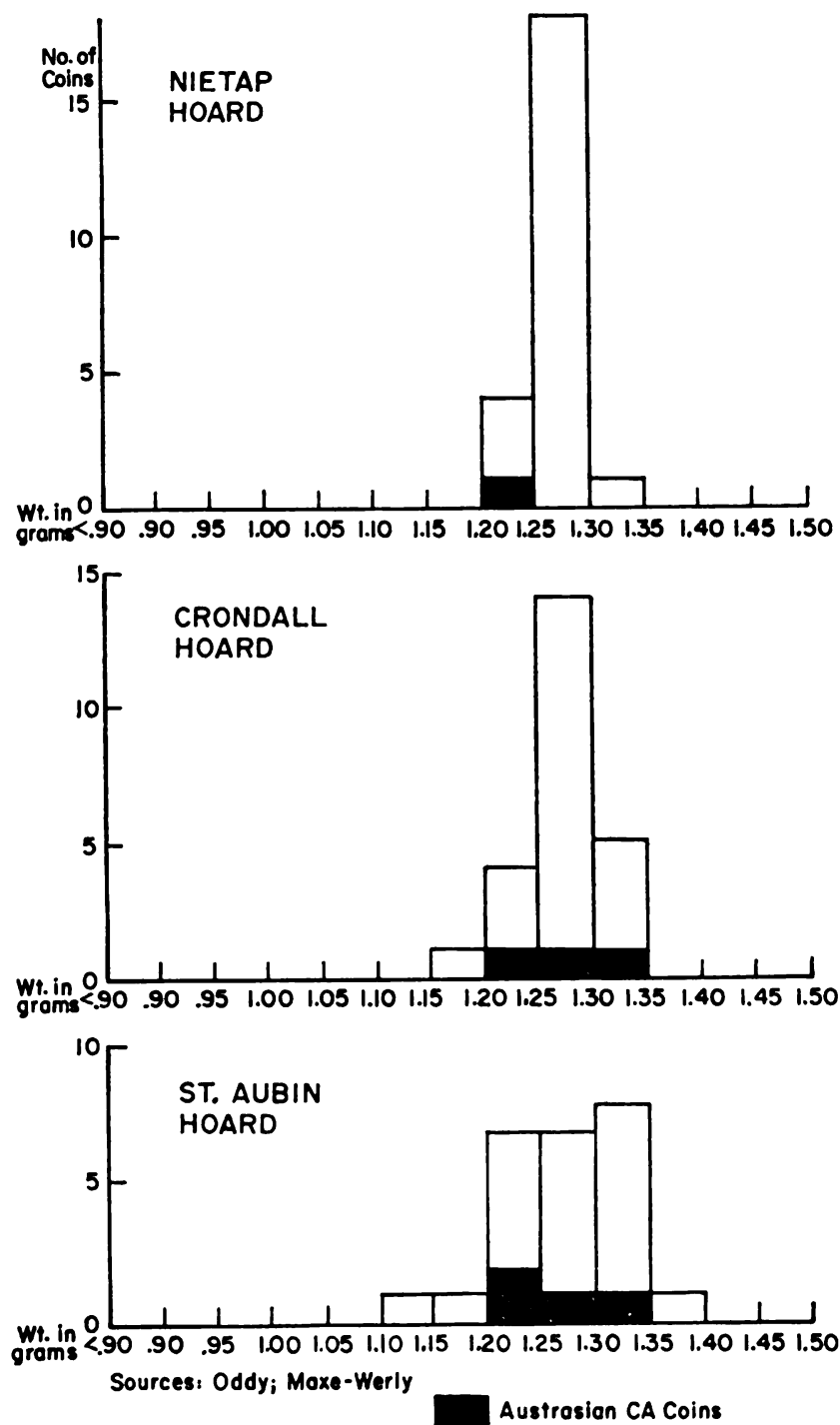
Austrasian CA coins is 57.3 percent, placing them equivalent to the 630–39 decade in the graph of royal coins.

An examination of weight standards yields similar results. As it was found by Kent that there is a separate standard of gold content for coins of the south of France, it is reasonable to assume that such a difference might exist in metrology. In constructing Table IV I have therefore included only royal coins produced outside of Provence. With the exception of the coins of Chlotar II (584–628), there is a perceptible diminution in the mean weight of these coins. The drop in the weight of the coins of Chlotar may be due to the small number of coins (11) from a reign of 44 years, or to the incorrect attribution to this monarch of coins minted for his great grandson, Chlotar III (657–73).

The coins from the hoards, again arranged in presumed chronological order, show a decline in mean weights, but only the decline from the Escharen hoard to the Sutton Hoo burial is statistically significant.²⁰ The mean weight of the coins from the Escharen hoard, 1.33 g, is near that of the coinage of Childebert II (575–96). The mean weights of the other four hoards (1.26–1.28 g) correspond to those of the coins of Charibert II and Dagobert I (628–38). There is a significant decline from the mean weights of these hoards to the 1.22 gram mean weight of all Austrasian CA coins. The low weight for the Austrasian coins may be a result of the large number of them which are below the weight of 1.20 grams, a phenomenon not present in the hoards (compare Table I with Table V). The Austrasian group may contain coins minted after those in the hoards, perhaps later imitations of a better controlled issue, or substandard contemporary coins which might not have been accepted in long range trade. If these coins below 1.20 g are elimi-

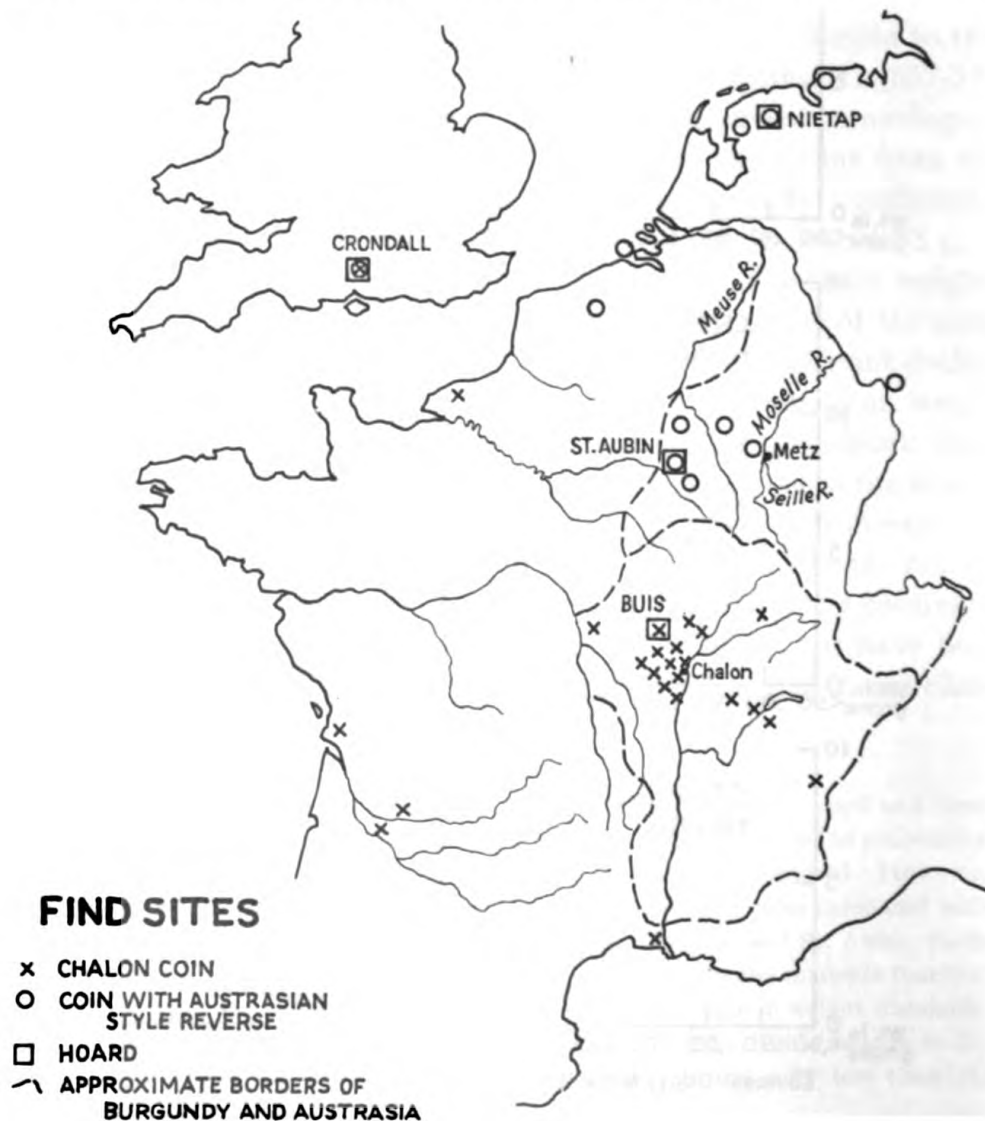
²⁰ A *t*-test done on the mean weights of the coins in the Escharen hoard and those in the Sutton Hoo burial yields a *t* of 3.33 and a *P less than .01. Thus the probability that this decline is the result of chance is less than one in a hundred. However, the same calculations for the mean weight of the Sutton Hoo coins compared with the mean weight of the combined hoards of Nietap, Crondall and St. Aubin yields a *t* of 1.2 and a *P between 0.2 and 0.3. Thus there is about one chance in four that this decline is the result of chance rather than of a real difference in weight standards. The decline from the weights of the Nietap, Crondall and St. Aubin hoards to the mean weight of all Austrasian CA coins yields a *t* of 3.0 and a *P less than .01; a significant decline.

TABLE V
Comparison of Weight Distributions



nated from calculations, the mean weight of the Austrasian CA coins comes to 1.25 g, closer to the 1.26–1.27 mean of the period 628–36 than to the 1.20 of the period 638–56.

The different types of evidence examined all point to a central date of 630–40 for the Austrasian CA coins. The beginning of the series may fall in the preceding decade, and some such coins may have been produced for an unknown period afterward. The three Austrasian minters who minted imitations of Chalon coins as well as Austrasian CA type coins were probably the ones who introduced the CA to the



reverse field of the coinage of Austrasia. The transition to the simplified Austrasian type may represent a consciously introduced change in type and an attempt to standardize a regional coinage.

Four of the minting sites appearing on the Austrasian CA coins (present day Dieuze, Marsal, Moyenvic and Vic-sur-Seille) are situated in the Saulnois, south of Metz along the river Seille at intervals of just a few kilometers. The Seille is a saline stream, and these towns were of great importance in ancient and mediaeval times as suppliers of salt which was shipped from Metz to an extended region.²¹ Their appearance on the coins of the seventh century is evidence of the economic importance of this region in the Merovingian period as well.

The geographically restricted nature of the minting of Austrasian CA coins points to a regional unity larger than the individual *civitas* but smaller than the kingdom of Austrasia, an area defined by the vicissitudes of partible inheritance, frequently changing in extent and alliances. The minting area lies within the former Roman province of Belgica I, an entity whose formal existence survived only in terms of the authority of the Archbishop of Trier. This area can now be recognized to have been a unified monetary region centered in the city of Metz, home of powerful Frankish families, and the salt-producing centers of the Saulnois.

APPENDIX

This is a listing of coins with the simple Austrasian CA reverse type. The coins are arranged according to the place names which appear on them, first those which can be reasonably identified with modern places, then those for which identification is doubtful or impossible. The place name is given first as it appears on the coins, followed by the modern equivalent. There follows a reference for the earliest appearance of

²¹ Michel Roblin, "Salines et fontaines salées," *93^e Congrès national des sociétés savantes* (Tours, 1968), Section d'archéologie, p. 194; R. P. François de Dainville, "Cartes du sel," *Le Role du sel dans l'histoire*, ed. M. Mollat (Paris, 1968), p. 32-33; Jean Schneider, *La Ville de Metz aux XIII^e et XIV^e siècles* (Nancy, 1950), p. 12; Ingrid Heidrich, "Die merowingische Münzprägung im Gebiet von oberer Maas, Mosel und Seille," *Rheinische Vierteljahrsblätter*, 38 (1974), 89.

the name in documents, its date and the original form. Where references to classical works appear, the information was obtained from *DTF* (see below). Within each place the coins are arranged according to minter's name. Each entry represents one coin type: first there is the number of reported specimens in parentheses, then the catalogue number (or numbers) of Belfort, then references to collections and hoards, followed by information on find spots and die links.

The only general catalogue of Merovingian coins, containing numerous errors and no photographs is A. Belfort, *Description générale des monnaies mérovingiennes*. 5 vols. Paris, 1892–95. The following reference works are cited in discussions of place name identifications:

Dictionnaire topographique de la France (DTF): *Meurthe*. H. Lepage. Paris, 1862. *Meuse*. F. Lienard. Paris, 1872. *Moselle*. E. de Bouteiller. Paris, 1874. BN The names and boundaries of these departments have been changed since the publication of these volumes. Gysseling, M. *Toponymisch woordenboek van België, Nederland, Luxemburg, Noord-Frankrijk en West-Duitsland*. Belgisch interuniversitair centrum voor Neerlandistiek, 1960.

The collections below contain, or contained, Austrasian CA coins:

Bourgey, Émile (auctioneer). Sale of Dec. 2, 1964.
 Bourgey, Étienne (auctioneer). Sale of Dec. 15, 1924.
 Cahn, A. E. (auctioneer). Sale of March 15, 1928.
 Fürstenberg. Sale by Cahn, Dec. 14, 1932.
 Lejeune. Sale by Peus, March 15, 1954.
 London. British Museum (BM). "Analyses of Merovingian Coins in the British Museum," *Methods of Chemical Investigation of Ancient Coinage*, ed. E. T. Hall and D. M. Metcalf (London, 1972), pp. 100–7.
 Metz. Musées de Metz.
 Middelburg. Museum van Middelburg, Zeeland, Netherlands.
 Motte. Sale by Émile Bourgey, Nov. 12, 1951.
 New York. American Numismatic Society (ANS).
 Paris. Bibliothèque Nationale (BN). M. Prou. *Les Monnaies mérovingiennes. Catalogue des monnaies françaises de la Bibliothèque Nationale*. Paris, 1892; Supplement in *RN* 1896.

Perregaux. Sale by Münzen und Medaillen, Dec. 8, 1949.

Ratto, R. (auctioneer). Sale of Dec. 9, 1930.

Three hoards contain Austrasian CA coins:

Crondall, C. H. V. Sutherland. *Anglo-Saxon Gold Coinage in the Light of the Crondall Hoard*. London, 1948.

Nietap, P. C. J. A. Boeles, "Merovingische munten van het type Donrijp en de vondst van Nietap", *Een kwart eeuw oudheidkundig bodemonderzoek en Nederland : Gedenkboek voor A. E. van Giffen*. (Meppel, 1947), pp. 369-84.

St. Aubin, L. Maxe-Werly. "Trouvaille de Saint-Aubin (Meuse)," *RN* 1890, pp. 12-53.

The following works contain information on additional Austrasian CA coins:

Berghaus, Peter. "Die merowingischen Trienten von Altenwalde," *Die Kunde* 1961, pp. 43-62.

Hagen, Wilhelmine. *Münzprägung und Geldumlauf im Rheinland*. Düsseldorf, 1968.

Lafaurie, Jean. "Trouvailles de monnaies mérovingiennes à Manre (Ardennes)." *BSFN* (Jan., 1972), pp. 145-47.

Werner, Joachim. *Münzdatierte austrasische Grabfunde*. Berlin, 1935.

IDENTIFIABLE PLACE NAMES

Bodesio vico. Vic-sur-Seille (Moselle). *DTF*: 757, 777, "Bodesius vicus."

Bosoaldus (1) Belfort 896, 897.

Dommolenus (1) Belfort 890.

Fainulfus (1) Belfort 898. BN 951.

Madelinus (1) BN, 952A.

Trasoaldus (1) Belfort 891.

(2) Belfort 892, 893. BN 950

(1) Belfort 894. BN 949.

(1) Belfort 895. Middelburg 23. Found at Domburg (Zeeland, Netherlands).

(1) Belfort 6050.

(1) Lafaurie 2. Found at Manre.

Doso vico. Dieuze (Moselle). *DTF*: 1066, "Duosa curtis."

Bertoaldus (1) Belfort 1815.

Marsallo. Marsal (Moselle). *DTF*: A.D. 44, "Marsallo."

Fati (1) Belfort 2412. BN 969a; Motte 95.

Fululinus (1) Belfort 2407. BN 965.

Garcoaldus (1) Belfort 2420. Metz 33.

Gisoaldus (4) Belfort 2419. BN 966; Fürstenberg 1059;
Metz 32. Crondall hoard 4.

Landoaldus (2) Belfort 2414, 2415. BN 967. One found at
Fresne (Meuse).

(1) Belfort 2416.

Toto (1) Belfort 2408. BN 968.

Mediano vico. Moyenvic (Moselle). *DTF*: 836, "Mediano vico."

Bertemundus (1) Belfort 2847. BN 972.

Garcoaldus (1) Belfort 2843. BN 973.

Theudemundus (1) Belfort 2837. Fürstenberg 1083.

Trasulfus (2) Belfort 2841, 2842. BN 974.

Walfechramnus (1) Belfort 2832. Metz 41
(4) Belfort 2833, 2834. BN 971; Metz 48; Für-
stenberg 1084.

-ermanus (1) Belfort 2845. BN 975.

-undovaldus (1) Belfort 2844.

Mettis. Metz (Moselle). *Notitia Dignitatum*; Ammianus Marcellinus:
"Mettis."

Ansoaldus (1) Belfort 2924. BN 939.
(2) Belfort 2925. Werner M114. One found at
Büttelborn (Kr. Gros.gerau).

(1) Belfort 2926. BN 937.

(2) Belfort 2927, 2930. Fürstenberg 1069. Ob-
verse die link with Metz 38.

(1) Belfort 2928. BN 938.

(1) Belfort 2929. Fürstenberg 1070.

(1) Belfort 2932. Middelburg 19. Found at Dom-
burg.

(1) Lejeune 2072.

(1) BM 92.

(2) BM 91. Crondall 5.

- (3) Metz 37; Cahn 135. Crondall 6.
 (1) Metz 38. Obverse die link with Belfort 2927.
 (1) Metz 39.
- Godecnus (1) Belfort 2935. BN 943.
 (1) ANS 51.
 (1) Metz 39A.
- Landoaldus (1) Belfort 2936. BN 941.
 (1) Belfort 2937. BN 942.
 (1) Belfort 2938.
- Theudelenus (1) Belfort 2953. BN 932. Obverse die link with BN 931bis.
 (2) Belfort 2954. BN 933; Middelburg 20. One found at Domburg.
 (1) Belfort 2955. Étienne Bourgey 154.
 (2) Belfort 2956. BN 934.
 (2) Belfort 2957. Nietap 2. One found in Frisia.
 (1) Belfort 2958. Fürstenberg 1074.
 (2) Belfort 2960. BN 935; Fürstenberg 1075.
 (1) BN 931bis. Obverse die link with Belfort 2953.
- (1) BM 93.
- Illegible (1) Belfort 2931. BN 936.
 (1) Metz 36.
- Scarponna. Dieulouard (Meurthe-et-Moselle), formerly Charpeigne.
 Antonine Itinerary, Ammianus Marcellinus: "Scarponna."
- Fainulfus: (1) Belfort 4006. Perregaux 398.
 (1) Belfort 4007. BN 995.
 (1) Belfort 4008.
 (1) Belfort 4009.
 (2) Belfort 4010, 4013. Ratto 2457.
 (2) Belfort 4011, 4012. BN 994; Metz 45.
- Waregiselus (3) Belfort 4014. BN 992; Perregaux 399.
 (2) Belfort 4015. BN 993; Fürstenberg 1016.
- Tullo. Toul (Meurthe-et-Moselle). Antonine Itinerary, Peutinger Table:
 "Tullum."
- Ludo (2) Belfort 4505.

Viriduno. Verdun (Meuse). Antonine Itinerary, Notitia Galliarum:
Viridunum.

- Bertoaldus (1) Belfort 4771.
Mundericus (2) Belfort 4751, 4772. St. Aubin 4.

DOUBTFUL OR UNIDENTIFIED PLACE NAMES

Arlavis mallo.

- Ardulfus (1) Belfort 315. BN 1009.

Billaco vico (?). Possibly Welschbillig (Kr. Trier). Gysseling: 798–814.,
“Billiaco.”

- Berteiricus (1) Belfort 860, 2031.

Botanisat vico.

- Landilinus (2) Belfort 926. BN 1007; Middelburg 25. One
found at Thionville (Moselle), one at Dom-
burg.

Caino Castro.

- Cicoaldus (1) Belfort 1317. BN 373.

Campione mallo.

- Adeleno (1) Belfort 1363. Fürstenberg 1017.
Landelino (1) Belfort 1362. BN 1010.

Epocio (?). Has been identified as Carignan (Ardennes), formerly Yvois.
Antonine Itinerary: “Epoisso.”

- Mannus (2) Belfort 27, 1857. BN 912, 913.
(1) Belfort 1855, 1856, 6174. BN 911.
(1) Émile Bourgey 15.

Matiriaco mallo. Has been identified as Mairy (Moselle) and Montmédy
(Meuse). *DTF*: 634, “Madiaco”; 894, “Madaria.”

- Theudelenus (2) Belfort 2789, 2791. BN 915, 916.
(1) Belfort 2790.

- Warimundus (1) Belfort 2792.
(1) Belfort 2794. BN 917.

- Illegible (1) Belfort 2385, 6237. BN 918.

Mosomo castro. Could be a camp anywhere along Meuse river (Lat.
Mosa); possibly at site of Mouzon (Ardennes) or Mousson (Meurthe-
et-Moselle).

- Bertacharius (1) Belfort 3082. Fürstenberg 1082.

- Theudemarus (1) Belfort 3076. BN 1043.
 (1) Belfort 3077. BN 1042.
 (1) Belfort 3078. BN 1041.
 (1) Berghaus 15a. Found at Altenwæld (Kr. Land Hadeln).
- Palaciolo. Could be Pfalzel (Kr. Trier) or Palzem (Kr. Saarburg).
 Gysseling: 732–33, "Palacilum."
- Domegiselus (2) Belfort 3317. BN 923; Hagen, p. 36. One found in Lorraine.
- Scola. May refer to a royal court or guard.
- Inte (2) Belfort 3521, 6344. St. Aubin 14.
- Illegible.
- Bobo (1) Belfort 5523. Middelburg 24. Found at Domburg.
- Theudenus (1) Belfort 3995. Fürstenberg 1058.
- Illegible (1) Belfort 1742. BN 1024bis; Fürstenberg 1034.
 (1) Belfort 2029. BN 1022.
 (1) Belfort 4649, 4652. BN 1024.
 (1) Belfort 4651, 5519. BN 1021.
 (1) Belfort 5524. St. Aubin 11.
 (1) Belfort 5527. BN 1026.
 (1) Belfort 5528. BN 1027.
 (1) Lafaurie 3. Found at Manre (Ardennes).
 (1) Lafaurie 5. Found at Manre (Ardennes).

“EGO SUM DEUS:”
A MISTAKEN LEGEND OF ARTOIS

(PLATE XIII)

J. D. BRADY

Near the start of his study of the *laudes regiae* or regal acclamations, Ernst Kantorowicz briefly discussed the use of religious legends on mediaeval coins, and the cynical or satirical interpretations to which such legends are liable. Thus the opening lines of the acclamations, “Christus vincit, Christus regnat, Christus imperat,” were used by Louis IX on the first gold coined in thirteenth century-France; but were known as well in the satirical version, “nummus vincit, nummus regnat, nummus imperat.”¹ Among other examples of legends inviting travesty or misconstruction, Kantorowicz introduced the following: “Nor can we suppose that people would have missed the joke, almost forced upon their minds, when Robert II of Artois, in the very same century [thirteenth] provided his deniers with the words, from Matthew: Ego sum Deus.”²

This would indeed be a startling inscription, whether considered simply as a pious tag, or in the extended sense of the coin speaking for itself, or even of the count speaking for himself; but it now appears that in giving currency to this legend Kantorowicz uncritically reproduced a mistaken reading by Wilhelm Froehner in the late nineteenth century. Because this reading has never been noticed or credited in numismatic writing by anyone except the original author, there would seem no point in drawing attention to it now; but since it has been revived and circulated to a wider readership by Kantorowicz, the error should be corrected.

¹ Ernst Kantorowicz, *Laudes Regiae. A Study in Liturgical Acclamations and Mediaeval Ruler Worship* (Berkeley/Los Angeles, 1958), pp. 4,6.

² Kantorowicz, *Laudes Regiae*, p. 6.

The single source which Kantorowicz quoted for the coin gives the inscription "Ego sum deus," the scriptural reference Matthew 22:32, and the attribution "denier de Robert II, comte d'Artois (1249)."³ The coin is not described or illustrated, and there is no reference to numismatic catalogues or monographs. Despite Froehner's silence about the exact identity of the coin from which he drew the legend, there can be no doubt that the type he had in mind was one well known and frequently illustrated during a long controversy of the past century, the type now attributed by Richebé, in his standard catalogue of Artois, to Robert I, "the Frisian," count of Flanders (1071–92).⁴ No other coin currently or formerly attributed to the minting authorities of the region—whether the monasteries of Saint-Vaast or Saint-Bertin, the counts of Flanders or the Capetian counts of Artois—has a legend that could be confused with the one cited by Froehner. The type is illustrated here (PLATE XIII, 4 enlarged 2 diameters) from a specimen in the Lille museum published by Richebé.⁵

It is not clear how many specimens exist. Richebé records the weight range of 0.53–0.58 g for an unspecified number of examples in the Lille museum. From the form of his other entries we can deduce first that there are possibly as few as two specimens in Lille, and second that none are known to Richebé from other collections. In the nineteenth century, as far as I can make out, a single specimen was published. At

³ Wilhelm Froehner, "La Liturgie romaine dans la numismatique," *Annuaire de la Société Française de Numismatique* 1889, pp. 35–55, see especially p. 53; cited by Kantorowicz, *Laudes Regiae*, p. 6, note 15. In the context of Matthew this is plainly a quotation of Exodus 3:6: "Ego sum deus patris tui, deus Abraham, deus Isaac, at deus Iacob." See also Mark 12:26, Luke 20:37, and Acts 7:32.

⁴ Claude Richebé, *Les Monnaies féodales d'Artois du X^e au début du XIV^e siècle* (Paris, 1963), p. 168, no. 4 and pl. 1, no. 4. Earlier literature not cited in the following footnotes is listed below in chronological order of publication: Charles Piot, "Remarques à propos d'un dépôt de monnaies du XI^e siècle," *RBN* 1857, pp. 96–113, pl. 4, nos. 1–6; Louis Dancoisne, *Essai sur la numismatique de l'abbaye Saint-Vaast* (Arras, 1869), especially pl. 1, no. 7; Émile Caron, *Monnaies féodales françaises* (Paris, 1882), especially pp. 381–82; Louis Deschamps de Pas, "Quelques observations sur les premières monnaies des comtes de Flandre, à propos d'une monnaie inédite de Lens," *RN* 1883, pp. 170–85.

⁵ Richebé, *Monnaies féodales*, pl. 1, no. 4. Thanks for supplying the photograph are due to Geneviève Becquart of the Musées d'Art et d'Histoire de Lille (Nord).

the start of the controversy it belonged to Constantin-Philippe Serrure and was published by Hermand in 1843.⁶ From this source it was probably copied by Piot⁷ and certainly by Poey d'Avent in 1862.⁸ From C.-P. Serrure the coin passed to Dewismes, who published a new drawing in 1866.⁹ Finally a third drawing was published by R. C. Serrure in 1880.¹⁰ Hermand and Dewismes were avowedly publishing a single specimen, but there are minute differences in the rendering, especially at the base of the central ornament of the obverse. The third version by R. C. Serrure has minute differences at the center of the reverse. Of these three renderings the one by Dewismes is most like the photograph published here. Hermand gives the weight of the Serrure/Dewismes specimen as 0.55 g. This is just between the limits of 0.53 and 0.58 g published by Richebé. It is possible that Hermand recorded weights to the nearest 0.05, and likely that his scales were not as sensitive as those now in use. In this conjecture, either of the limits given by Richebé could have been read by Hermand as 0.55 g. In 1875 the entire Dewismes collection of 800 pieces was purchased by Achille Vernier, and at least the greater part of it was among the 1,700-odd Flemish coins which Vernier sold to the Lille museum in 1900. In sum, it is probable that the Serrure/Dewismes specimen, the center of the nineteenth-century controversy and the coin cited by Kantorowicz

⁶ Alexandre Hermand, *Histoire monétaire de la province d'Artois et des seigneuries qui en dépendaient, Béthune, Fauquembergues, Boulogne, Saint-Pol et Calais* (Saint-Omer, 1843), p. 285, note 1: "Cabinet de M. Serrure, de Gand." C.-P. Serrure was professor of history at Ghent, father of S.-A. Serrure (known as Serrure *fils*), and grandfather of R. C. Serrure. All three wrote on numismatics, but only the latter two on the coin in question here.

⁷ Charles Piot, untitled review of C.-A. Serrure (see note 15 below), *RBN* 1856, pp. 354-62 and pl. 17, no. 4.

⁸ Faustin Poey d'Avant, *Les Monnaies féodales de France*, vol. 3 (Paris, 1862), p. 397, no. 6749 and pl. 157, no. 16.

⁹ Adolphe Dewismes, *Numismatique artésienne. Catalogue raisonné du comté d'Artois faisant partie du cabinet monétaire d'Adolphe Dewismes à Saint-Omer* (Saint-Omer, 1866), especially pp. 209-10 and pl. 5, no. 78; p. 210: "Cette jolie pièce . . . nous a été cédée par M. Serrure, père . . ."

¹⁰ R. C. Serrure, "Une page de l'histoire monétaire de Flandre (1070-1100)," *RBN* 1880, pp. 188-215, especially pp. 195-96 and pl. 16, no. 2.

from Froehner, is now in the Lille museum.¹¹ What matters in this recapitulation is not so much the exact number of pieces known earlier or at present, but rather that all the published illustrations are virtually indistinguishable. The epigraphy is unambiguous. While there has been contention about interpreting the central types, there has been none about transcribing the legends.

The obverse is inscribed + EGO SVM DE, around a bilaterally symmetrical ornament in the form of leaves and tendrils issuing from an inverted crescent at the base. The reverse is inscribed + ROBERTI, around a bold cross. In the first and fourth quarters is a configuration of dots at the tip of a line or rod issuing from the center; in the second and third quarters, also at the end of a line, is a three-branched figure resembling *psi*, or a lowercase *omega* or *e*.¹² These radial ornaments have the general appearance of a mace and trident respectively. The epigraphy of the inscription is firm and regular. The only exceptional feature is the obverse M, formed of two solid upright strokes connected by a thin line slanting from upper left to lower right, and dividing in the center to form a small annulet.

The attribution of this and a related body of coins was the core of the nineteenth-century dispute. On the time, place, and authority of the series depends the chronology of post-Carolingian Flemish coinage, and naturally enough the controversy was colored in part by nationalistic emotions, either pro-French¹³ or pro-Belgian.

¹¹ The dispersal of some of Dewismes's collection by Vernier and a series of thefts from the Lille museum between 1911 and 1916 should caution against the absolute assumption that the Dewismes specimen is now in Lille. See Pierre Bastien and Jean Duplessy, *Musée des Beaux-Arts de Lille. Catalogue des monnaies d'or flamandes de la collection Vernier* (Wetteren, 1975), introduction by Hervé Oursel, pp. 5-6; also August de Meunynck, "Les Pièces uniques, rares, ou inédites de la grande collection de Flandre, appartenant au Musée de Lille," *RBN* 1902, pp. 37-56. On p. 41, de Meunynck refers summarily to six deniers of Arras and five of Saint-Omer which came from Vernier, but the single one described as unique is Richebé's no. 7, rather than the no. 4 under discussion now.

¹² Richebé, *Monnaies féodales*, p. 168 reads *omega*; Joachim Lelewel, "Monnaies des évêques de Tournai. Lettre à M. de Coster," *RBN* 1846, p. 310 read *e*.

¹³ As credited by Poey d'Avent, *Monnaies féodales*, vol. 3, p. 397 to Hermand, "qui a combattu vaillamment *pro aris et focis*."

On first publishing the coin in 1843, Hermand attributed it to the time of Count Robert II of Artois (1250–1302).¹⁴ C.-A. Serrure, in the first of his two articles in 1856,¹⁵ reattributed it to Count Robert I or II of Flanders (1072–93, 1093–1111), partly on the basis of stylistic uniformity with four other coins inscribed "Robert" or "Baldwin," partly on its stylistic association with a hoard of coins attributed by M.-J. Rigollot¹⁶ to Eustace IV of Boulogne (1150–53). Hermand in rebuttal argued that the workmanship and alloy were finer than anything that could be attributed to the Netherlands in the eleventh or twelfth century, and held by his original attribution.¹⁷ Piot rejected Hermand's attribution as too late, but argued against Serrure for Robert of Béthune (1145–92).¹⁸ De Coster accepted Serrure's attribution.¹⁹ In a concluding article in 1856, Serrure argued that the names of Robert and Baldwin on stylistically related coins—and so acknowledged by all—could not fit Béthune or Artois.²⁰ Hermand's attribution was still accepted by Poey d'Avant in 1862,²¹ while C.-A. Serrure's case was summarized in 1880 by his son, R. C. Serrure: "La mort de M. Hermand vint clore toute discussion. Le combat finit faute de combattants; et la question si longtemps discutée fut remise dans les cartons."²² Following Serrure, Richebé today attributes the piece to the mint of Arras in the time of Count Robert I, "the Frisian," and on the stylistic evidence of the Erwetghem hoard rejects an attribution to any later authority

¹⁴ Hermand, *Histoire monétaire*, p. 285.

¹⁵ Constant-Antoine Serrure, "Restitution de cinq monnaies à Robert-le-Frison ou à Robert de Jérusalem, comtes de Flandre," *Messenger des sciences historiques de Belgique* 1856, pp. 237–41.

¹⁶ Marcel-Jérôme Rigollot, "Mémoires sur de nouvelles découvertes de monnaies picardes," *Mémoires de la Société des Antiquaires de Picardie* 1846, pp. 355–78.

¹⁷ Alexandre Hermand, "Lettre adressée à M. R. Chalon, président de la Société de la numismatique belge," *RBN* 1856, pp. 345–50; and "Revendication au nom de Robert II d'Artois des deniers qui lui sont contestés," *RBN* 1856, pp. 467–89.

¹⁸ Piot, *RBN* 1856, pp. 354–62.

¹⁹ Pierre de Coster, "Trouvaille de monnaies du onzième siècle," *RBN* 1856, pp. 398–439.

²⁰ Constant-Antoine Serrure, "Note sur les monnaies de Robert II et Baudouin VII comtes de Flandre," *Messenger des sciences historiques de Belgique* 1856, pp. 500–503.

²¹ Poey d'Avant, *Monnaies féodales*, vol. 3, p. 397.

²² R. C. Serrure, "Flandre," p. 189.

such as Bishop Robert of Arras, Robert of Béthune, or Robert II of Artois.²³

While the matter of attribution can be considered as closed for almost a century now, the reading of the legend is still open. EGO SVM DE / ROBERTI can be read either as a single legend continuing from one face of the coin to the other, or as two unrelated legends. Then, the legend can be understood either as completely spelled out, or as abbreviated. One line of interpretation started by Hermand and still entirely tenable is that this is a single inscription spelled out in full: "I am Robert's."²⁴ Formally, there are two irregularities in the construction that are not clear in English translation: first, the non-classical use of the preposition *de* to indicate origin, authorship or ownership, and second, the use of the genitive case instead of the ablative after the preposition. Another line of interpretation is that *de* is an abbreviation for a substantive, rather than a complete preposition. R. C. Serrure reads it as "denarius" by analogy with other inscriptions such as "bonus denarius" or "isi a munai."²⁵ He also takes this as a single inscription: "I am the denarius of Robert."

What of EGO SVM DE[VS] / ROBERTI? Froehner's interpretation of DE as DEVS was published in 1889, after all but Richebé had written on the subject, and from the silence of the others seems to have been original. Against Froehner's interpretation one powerful formal criticism can be made: the word *deus* is the original of the "nomina sacra" which in a very ancient tradition, carried over into Latin palaeography and epigraphy, have characteristic and invariable abbreviations. The pseudo-Jerome describes the basic rule of this sort of abbreviation by

²³ Richebé, *Monnaies féodales*, p. 168 for the coin; pp. 39, 192 for the hoard. See also R. C. Serrure, "Trouvaille de deniers du XII^e siècle," *RBN* 1880, pp. 216–42.

²⁴ Hermand, "Revendication," p. 485: "La légende EGO SVM DE ROBERTI appartient à l'époque où la particule DE dans les inscriptions latines, est en vogue sur les sceaux, c'est-à-dire au XIII^e siècle." His original account in *Histoire monétaire*, p. 285 is ambiguous: "La légende *ego sum de* . . . doit avoir absolument la même signification et la même portée que la légende *monetae* de la pièce qui précède" [Richebé's no. 3, p. 168]. From this we could suppose that Hermand understood *de* either as a preposition, or as an abbreviation of a substantive on a par with "*monetae*."

²⁵ R. C. Serrure, "Flandre," p. 195, citing also Hermann Dannenberg, *Die deutschen Münzen der sächsischen und fränkischen Kaiserzeit*, vol. 1 (Berlin, 1876), p. 105, no. 5.

suspension: "In the books of the Greeks wherever the names are written down, [only] the first and last letters are spelled out and a little stroke marked above from left to right."²⁶ In this convention, *deus* is abbreviated as *ds* and in no other way. In a modern analogy, to read *mi* as *mister* would be as startling as Froehner's reading. In numismatic epigraphy the convention of the "nomina sacra" is as carefully observed in the crude silver coinage of the Vikings of Northumbria around the start of the tenth century²⁷ as in the elaborate gold and silver types of the thirteenth century. The convention is inseparable from the practice of literacy in the Middle Ages; while the convention is likely to have been imperfectly known to some numismatists before the publication of Traube's classic study in 1907,²⁸ it is instructive that not one of the 11 authors before Froehner suggested that *de* be read as *deus*. In formal, terms, Froehner's reading is difficult if not impossible. It was picked up uncritically by Kantorowicz who gives no sign of having read or seen Froehner's unnamed sources. The legend EGO SVM DEVS should be dismissed as a scholarly myth, and the burden of proof rests on those who argue the contrary.

²⁶ "In libris Graecorum ubicumque per notam scribuntur nomina, primae et novissimae notantur litterae et virgula superposita in dexteram aequae veniente a sinistra," Jerome, *De monogrammate*, ed. German Morin, *Sancti Hieronimi presbyteri tractatus . . .* (*Anecdota Maredsolana* vol. 3 pt. 3, Maredsous, 1903), pp. 194 ff.; quoted by Henri Leclercq in "Nomina sacra," *Dictionnaire d'archéologie chrétienne et de liturgie*, vol. 12 pt. 2 (Paris, 1936), col. 1479. The treatise is listed as no. 637, "De monogramma XPI," in Eligius Dekkers, *Clavis patrum latinorum*, 2nd ed. (*Sacris erudiri* vol. 3, Brussels/The Hague, 1961), pp. 147–48, and described as "Certe post S. Hieronymi tempora confectum."

²⁷ See C. S. S. Lyon and B. H. I. H. Stewart, "The Northumbrian Viking Coins in the Cuerdale Hoard," *Anglo-Saxon Coins: Studies Presented to F. M. Stenton*, ed. R. H. M. Dolley (London, 1961), pp. 96–121, pls. 11, 12; especially types DNS DS REX, p. 101 and pl. 11, no. 18 and DNS DS O REX p. 103 and pl. 11, nos. 43–45.

²⁸ Ludwig Traube, *Nomina sacra. Versuch einer Geschichte der christlichen Kürzung* (Munich, 1907).

THE FĀRS HOARD: A BŪYID HOARD FROM FĀRS PROVINCE, IRAN

(PLATES XIV-XVII)

DONALD S. WHITCOMB

The "Fārs hoard" is a group of 272 dirhams donated to the American Numismatic Society by Eric P. Newman in 1973. It was purchased by R. W. Morris in Iṣfahān in 1967 and hence no certain provenance can be determined for the coins. The wear and corrosion of the coins and compositional features of the hoard as a whole, suggest the probability that these issues are from a single hoard and that, if the "Fārs hoard" is not complete, at least a random sample is preserved. Indeed, Morris (in a private communication) believed that other coins seen on the market at about the same time came from this hoard.

The dirhams are all issues of the Būyid dynasty, the majority originating from mints in Fārs province in southern Iran. The hoard contains a large number of inedited issues and one previously unrecorded mint. Moreover, the Fārs hoard is distinctive and important as a hoard. In comparison to published hoards of the period,¹ which are generally composed of a wide range of issues and dynasties, the Fārs hoard is marked by a limited number of mint locations and relatively short time span of about 35 years, from 347 H./A.D. 958 to 382/992. In regard to these dated issues, the coins of the hoard fall into two chronological groups: those of 347-72, and those from 380 to 382. The division is almost precisely equal both by number of coins and by weight of the coins. This paper will argue that the Fārs hoard is a carefully composed assemblage of coins, a mediaeval "purse," which holds interesting

¹ H. W. Mitchell, "A Hoard of Dirhems from Ardekan," *NC* 1965, pp. 209-20; N. M. Lowick and J. D. F. Nisbet, "A Hoard of Dirhems from Ra's al-Khaimah," *NC* 1968, pp. 231-40. I wish to express my appreciation to Michael L. Bates, who brought the Fārs hoard to my attention and provided generous assistance for this research, and to the American Numismatic Society for its support during the 1975 Graduate Seminar.

implications for the commercial history of Fārs province in the latter half of the tenth century.

THE BŪYIDS

In the tenth century the power of the 'Abbāsid caliphs passed from their hands to their Būyid amīrs. Busse characterizes the government of the Būyids as a military dictatorship² since their politics were strongly colored by their Daylamī origins (in northern Iran near the Caspian Sea) and by the Daylamī troops which were the mainstay of their power. They attempted to rule their territories through separate administrations each headed by a member of the Būyid family; this generally meant a tripartite rule based on the three centers of the empire: Shīrāz, Rayy, and Baghdād. Of these three cities, Shīrāz, the capital of Fārs province, proved most attractive to these Iranian rulers and became their principal center.

After the death of 'Imād al-Dawla, the founder of the empire, in 338/949, the first and strongest tripartite rule was formed. Rukn al-Dawla, the eldest of the family, held the senior emirate in Rayy, while his son, 'Aḍud al-Dawla, presided over Shīrāz. Most of the coins in the hoard from this period reflect this relationship with Rukn al-Dawla's name on the obverse and 'Aḍud al-Dawla, *al-amīr al-'adl* (sic), "the just amīr," on the reverse. In Baghdād, Rukn al-Dawla's brother, Mu'izz al-Dawla, governed after his entry into the city in 334/945 in the name of the caliph al-Muṭī'. Mu'izz al-Dawla appears with his son and successor, 'Izz al-Dawla on a coin from the Baghdād mint in the hoard (Cat. 263, see "Madīnat al-Salām" for fuller discussion). In 363/973 the caliph al-Muṭī' was succeeded by al-Ṭā'i'.

After the death of Rukn al-Dawla in 366/976, the strong discipline and order within the family bowed to the stronger personality of 'Aḍud al-Dawla. He soon defeated 'Izz al-Dawla and united Fārs and Iraq under his personal rule. His brother, Mu'ayyad al-Dawla, governed the Jibāl; his son, Shīrdīl (later known as Sharaf al-Dawla) governed

² H. Busse, "Iran under the Būyids," *Cambridge History of Iran*, vol. 4, *The Period from the Arab Invasion to the Saljuqs* (Cambridge, Eng., 1975), p. 251.

in Kirmān and his second son, Marzubān (later entitled Ṣamsām al-Dawla) was placed over 'Umān and Khūzistān. Both Shīrdīl and Marzubān appear on coins in the Fārs hoard minted in their respective provinces.

The borders of the Būyid empire reached their maximum extent during the energetic rule of 'Aḍud al-Dawla. His viceroys ruled the former territories of the Ḥasanwayh Kurds in Aḍharbayjān and of the Hamdānids in Syria as far as Aleppo; in the east, Ṣaffārid lands and tribal areas of the Makrān were annexed to Kirmān. This period of consolidated rule lasted from 367/977 until 'Aḍud al-Dawla's death in 372/983. Only a very few coins from the hoard relate to this period of the individual rule of 'Aḍud al-Dawla and his vassals.

The struggles for succession between the sons of 'Aḍud al-Dawla and Fakhr al-Dawla which followed occupied the empire until the death of Sharaf al-Dawla in 379/989. The rule of Baghdād was inherited by Bahā' al-Dawla, a younger son of 'Aḍud al-Dawla. Although the "senior amirate" continued to be debated, an uneasy tripartite division of the empire was reinstituted similar to that under Rukn al-Dawla.³ Fakhr al-Dawla ruled the Jibāl, with Ṣamsām al-Dawla (Marzubān b. 'Aḍud al-Dawla) in Fārs and Bahā' al-Dawla in Iraq. Over half the coins in the Fārs hoard date to the early years of this settlement, 380-82/990-92; the coinage testifies to the seniority of Fakhr al-Dawla (whose name appears on the obverse), at least in relation to Ṣamsām al-Dawla. It was in these years that Bahā' al-Dawla deposed the caliph al-Ṭā'i and installed al-Qādir in the caliphate. Though there was reluctant acceptance of this change in Khurāsān,⁴ al-Qādir's name appears on the Fārs coinage almost immediately.

The rivalry between Baghdād and Rayy continued until 387-88/997-98 when both Fakhr al-Dawla and Ṣamsām al-Dawla died violently. Bahā' al-Dawla inherited a temporarily-unified empire and moved his capital to Shīrāz, which remained the center of the declining fortunes of the Būyids until it fell to the Saljūqs in 454/1062.

³ Busse, "Iran," p. 292.

⁴ G. C. Miles, *The Numismatic History of Rayy* ANSNS 2 (New York, 1938), pp. 174-75.

The coinage of the Būyids, in general and as reflected in the Fārs hoard, seems to be most abundant during the two periods of relatively stable and peaceful tripartite rule. In both periods the ruler of Fārs province, i.e. 'Aḍud al-Dawla and then Ṣamṣām al-Dawla, was in a sense subservient to another division of the empire. As Miles noted, the Būyid coinage is "particularly informative to the political historian,"⁵ a fact which has perhaps overshadowed the economic aspects of this currency. The policy of minting operations in Fārs province was in all probability less a function of political power than of commercial necessities. The composition of the Fārs hoard offers a rare synthesis for the economic history of the Būyids in this province.

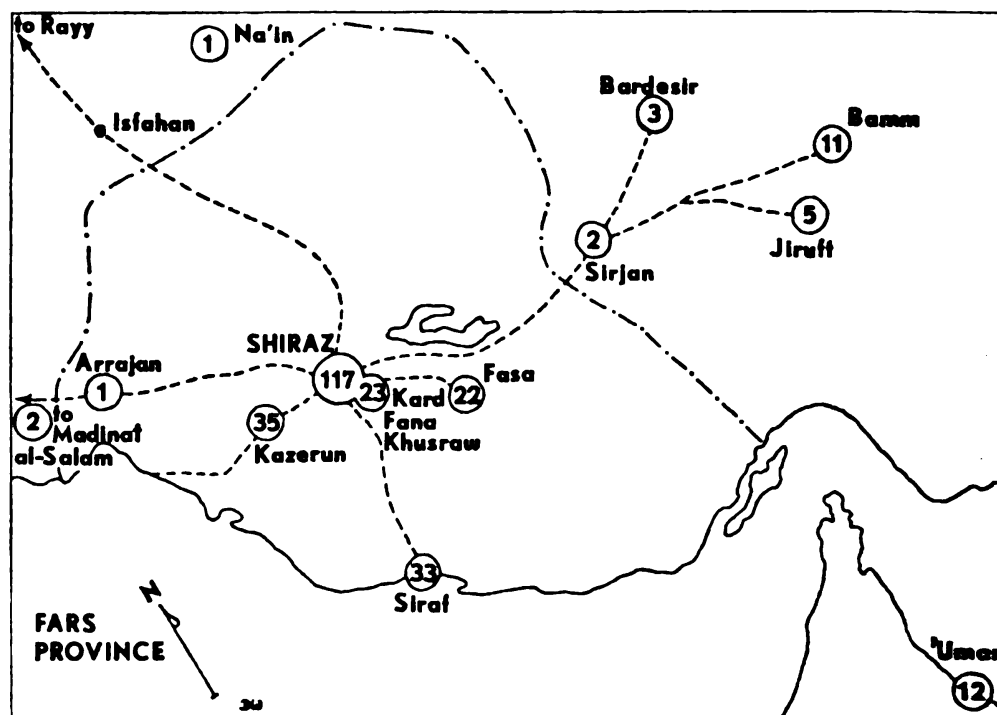


FIG. 1. Total Hoard Coins for Each Mint.

⁵ G. C. Miles, "Numismatics," *Cambridge History of Iran*, vol. 4, *The Period from the Arab Invasion to the Saljuqs* (Cambridge, Eng., 1975), p. 375.

THE MINTS

Arrajān

The town of Arrajān marked the western border of Fārs province. During the Būyid period, Arrajān held a special place as an early center of power, a natural staging point for movements into the three divisions of the empire; as Busse has noted, the town stands at almost the exact geographical center of the Būyid empire.⁶ Muqaddasī describes the town as “the storeroom of Fārs and the warehouse of Khūzistān and Iṣfahān,”⁷ and ‘Aḍud al-Dawla is reported to have said, “I want Mesopotamia for the sake of its name, but I want Arrajān for its revenue.”⁸ This revenue derived from the transshipment of goods carried between Shīrāz and Iraq and from local products such as fruits, oils and soap.

Arrajān was the capital of the district (*khurra*) of Qubādh in Sāsānian times and an Umayyad mint reflects the continuation of the importance of the town. The mint operated under the Saffārids and finally the Būyids. The mint is represented in the hoard by a single coin which dates to 381 and bears the names of the caliph al-Ṭā‘i‘ and Ṣamṣām al-Dawla.⁹ The absence of Fakhr al-Dawla’s name suggests that his seniority was not yet recognized in this area.

Sīrāf

Sīrāf was the principal port on the Persian Gulf in the tenth century, an entrepôt for far eastern goods destined for Baghdād and the west and for the local products of Fārs, especially cloth, including silks, and spices. The wealth of Sīrāfi merchants is mentioned by Ibn Ḥawqal and other geographers and is reflected in the residences which have recently been excavated.¹⁰

⁶ Busse, “Iran,” pp. 282–83.

⁷ Muqaddasī, *Aḥsan al-Takāsim*, ed. M. de Goeje. Bibliotheca Geographorum Arabicorum 3 (Leiden, 1906), p. 425.

⁸ Busse, “Iran,” p. 282, quoting Muqaddasī.

⁹ A. K. Markov, *Inventarnyi katalog musul'manskikh monet Imperatorskago Ermitazha* vols. 3–4 (St. Petersburg 1900–1904), p. 981.

¹⁰ Ibn Ḥawqal, *Kitāb al-Masālik wa'l-mamālik*, ed. J. H. Kramers. Bibliotheca Geographorum Arabicorum 2 (Leiden/Leipzig, 1938–39). p. 281. D. Whitehouse, “The

These recent excavations have revealed an early Umayyad or possibly Sāsānian town; a mint was not established at Sirāf until the Būyid period, and then almost entirely under 'Aḍud al-Dawla's rule. The issues of this mint are very poorly known, due mainly to the orthographic similarity of this name and "Shīrāz." A definitive series will soon appear with the excavation report.¹¹ The Sirāfī coins in the hoard, ranging from 347/958 to 371/981 are mostly previously unattested; these are the issues of 347, 348, 350, 357, 359, 362, 365, 366 (published as "Shīrāz" by Ghalib, no. 867), and 371.¹² It may be noted here that this type of dirham is common to all the mints of Fārs and may be the "ʿadlī" dirham mentioned by Muqaddasī.¹³ The type shows Rukn al-Dawla on the obverse and, on the reverse, the caliph al-Muṭī' and 'Aḍud al-Dawla, the *ʿamīr al-ʿadl*. The 365/975 issue marks the succession of al-Ṭā'ī' and the change of 'Aḍud al-Dawla's title to *al-malik al-ʿadl*, "just king." His titulature, of which much has been written, was expanded further on the 371 issue which adds *tāj al-milla* "crown of the community."¹⁴ The coins illustrated on PLATE XIV date from 347 (Cat. 3), 357 (Cat. 9), 361 (Cat. 12), and 371 (Cat. 33) and give an example of the changing styles of pointillate circles and annulets.

Houses of Sirāf, Iran," *Archaeology* 1971, pp. 255–62; and interim reports on the excavations at Sirāf in Iran, 1968–74.

¹¹ For a preliminary description of the Sirāfī coinage, see N. M. Lowick, "Trade Patterns on the Persian Gulf in the Light of Recent Coin Evidence," *Near Eastern Numismatics, Iconography and History: Studies in Honor of George C. Miles* (Beirut, 1974), pp. 319–33.

¹² The issue of 361 is attested in *Istanbul arkeoloji müzeleri teşhirdeki islami sikkeler kataloğu*, by I. and C. Artuk, vol. 1 (Istanbul, 1970), no. 1030. It should be noted that the majority of these unattested issues from this mint and others discussed here have been identified by Stephen Album in the collections of major museums. The data used for Fig. 5 is partially derived from Album's notes.

¹³ Muqaddasī, *Aḥsan al-Takāsim*, p. 471, note i; see also M. Kabir, *The Buwayhid Dynasty of Baghdad, 334/946 – 447/1055* (Calcutta, 1964), p. 174.

¹⁴ H. Busse, *Chalif und Grosskönig: Die Buyiden im Iraq (945–1055)* (Beirut, 1969); and W. Madelung, "The Assumption of the Title Shahanshah by the Buyids and 'The Reign of the Daylam (Dawlat al-Daylam)," *Journal of Near Eastern Studies* 1969, pp. 84–108, 169–83.

Shīrāz

The capital of Fārs province was a foundation of the Umayyads and slowly superseded the older Sāsānian city of Iṣṭakhr. Originally the town was a military center, located precisely in the middle of the five Sāsānian district capitals of the province and on the crossroads of the routes from Sīrāf to Iṣfahān and from Kirmān to Arrajān and Iraq. Shīrāz soon gained a commercial preeminence in redistribution of the goods of the province and as a manufacturing center, particularly of textiles (see Kard Fanā Khusraw and below). Ibn Khaldūn mentions that in the time of al-Ma'mūn the taxes of Fārs were paid in part with 30,000 bottles of rosewater, probably from the city of Jūr (Fīrūzābād).¹⁵ The attentions which the Ṣaffārids paid to this city were a prelude to the Būyid constructions. 'Aḍud al-Dawla built a number of palaces in the city, a hospital second only to that of Baghdād, a library, an observatory and a citadel. It was not, however, until the reign of Ṣam-ṣām al-Dawla that the city itself was fortified.

The mint in Shīrāz began under the Ṣaffārids, though the earlier mint named "Fārs" may have been located in the city; this was the only mint in the province during the third/ninth century and would seem to be the mint Iṣṭakhrī refers to when he states, "there is no mint in Fārs other than in Shīrāz."¹⁶ Certainly the Shīrāz mint remained the most important mint in the province through the Būyid period. The early group of Shīrāzī coins in the hoard date from 335/965 to 366/976, a series in which the years 357 and 364 are previously unattested.¹⁷

¹⁵ Ibn Khaldūn, *Maqaddima*, ed. M. de Slane, vol. 1 (Paris, 1862), p. 365; trans. F. Rosenthal (New York, 1958), p. 362.

¹⁶ Iṣṭakhrī, *al-Masālik wa'l mamālik*, ed. M. de Goeje. Bibliotheca Geographorum Arabicorum 1 (Leiden, 1927), p. 158.

¹⁷ For 355: J. C. Lindberg, "Essai sur les monnaies coufiques frappées par les émirs de la famille des Bouides," *Mémoires de la société Royale des Antiquaires du Nord* (Copenhagen, 1840-44), p. 232, no. 48. For 358,359: E. von Zambaur, *Die Münzprägungen des Islams* (Wiesbaden, 1968). For 360: S. Lane-Poole, *Catalogue of Oriental Coins in the British Museum*, vol. 9 (London, 1889), no. 663t. For 361: *Istanbul . . . kataloğu*, no. 1031. For 362: R. Vasmer, "Der Münzfund von Peuth," *Beiträge zur Kunde Estlands* 1927, pp. 72-73, no. 28. For 363: I. Ghalib Edhem, *Maskūkāl-i qadīme islāmīyeh qatalōghī* vol. 2 (Constantinople 1312/1894-95), no. 866. For 380: *Catalogue of the Coins in the Numismatic Cabinet Belonging to J. Gerson da Cunha* (Bombay, 1888-89), no. 1277. For 382: *BMC Oriental*, vol. 9, no. 667b.

The examples shown on PLATE XIV are from 355 (Cat. 35), 359 (Cat. 41), and 363 (Cat. 77) of the standard "ʿadlī" type. The later coins date from 380/990 to 382/992 and bear the names of Fakhr al-Dawla, entitled "celestial sphere of the community," on the obverse and Ṣam-ṣām al-Dawla, "light of the community," on the reverse. Three coins from 381 are illustrated on PLATE XV (Cat. 104, 128, 134). This corpus of later coins from Shīrāz provides the materials for a full seriation of issues based on annulets, pointillate circles, and symbols within the field of both the obverse and reverse (Fig. 2). These stylistic details are invaluable for distinguishing coins of Shīrāz from those of Sīrāf and for the identification of coins with the mint name effaced. While it has been speculated that these symbols may indicate the mint master or *ʿamīl*, there is no evidence for this suggestion.¹⁸ One may note the unique symbol on Cat. 134, a doubled monogram of "Moḥammad" which the engraver neglected to reverse (it appears correctly on issues of the following year).

Fasā

This city succeeded the mint town of Darābjird as the main city in the southeastern part of Fārs province during the Umayyad period. By the tenth century, Ibn Balkhī describes the city as being as large as Iṣfahān and its mosque as rivaling that of Madīna. Though Busse would depict the city as a military base,¹⁹ Fasā's importance was due mainly to its textile industry, particularly its carpets and brocades.

While some issues of earlier periods have been discovered, the mint at Fasā became important only in the Būyid period. The coins in the hoard are all "ʿadlī" issues dating from 354/965 to 365/975 with two coins of the later Būyid issues represented (see addendum). The coins of 354, 361, 362, 363, 365, and 381 are previously inedited.²⁰

¹⁸ For another recent utilization of seriation in these symbols, see A. S. DeShazo and M. L. Bates, "The Umayyad Governors of al-Iraq and the Changing Annulet Patterns on their Dirhams," *NC* 1974, pp. 110–18.

¹⁹ Busse, "Iran," p. 282.

²⁰ For 355 and 359; Zambaur, *Münzprägungen des Islams*, "Berliner Königliche Museen, Notizen über noch nicht veröffentlichte Bestände an mohammedanischen Münzen (handschriftlich)." For 358: Ghalib, *Maskūdat . . . qatalōghī*, no. 870; *Istanbul kataloğu*, no. 1027.

SHIRAZ

		381 382									
Caliph Tā'i/Qādir	Margin	!	!	!	!	!	!	!	!	!	!
		0x5	0x5	0x5	0x5	0x5	0x5	0x5	0x5	0x5	0x5
Obverse		—	—	—	—	—	—	—	—	—	—
		•	•	•	•	•	•	•	•	•	•
Reverse		—	—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—	—

FIG. 2. Seriation of Coin Symbols.

Kāzarūn

The city of Kāzarūn was a Būyid foundation near the ruins of the older Sāsānian and Umayyad city of Sābūr (Shāpūr, or Bīshāpūr). The region was (and still is) famed for its citrus fruits and dates, but the importance of the town was due to its linen textiles of the Tawwazī style. The warehouses set up by ‘Aḍud al-Dawla are said to have brought 10,000 dinars in taxes yearly.²¹ Kāzarūn does not seem to have minted coins until the reign of Ṣamṣām al-Dawla. The hoard contains a series of 25 coins dating to 381/991, almost all struck from two sets of dies. This issue is otherwise unattested and does not appear to have been very large.

Kard Fanā Khusraw

This town was, like Kāzarūn, a specialized commercial center created for the state textile industry (*ḡirāz*, see below). It was founded by ‘Aḍud al-Dawla (and bears his personal name, Fanā Khusraw) immediately to the southeast of Shīrāz. Craftsmen were brought from the various parts of the empire and settled in this city.

The mint was probably an integral part of the Sūq al-amīr, which brought 20,000 dinars in taxes a year. The hoard fills in several previously unattested issues from Kard Fanā Khusraw, 355, 361, 362, 363, all of the standard “‘adlī” type, 380 and 381 under Ṣamṣām al-Dawla.²² Coins of 356 (Cat. 208) and 382 (Cat. 226) are illustrated here; the latter is curious in that Ṣamṣām al-Dawla’s title *al-malik al-‘adl* is altered so *al-‘adl* is purposefully dropped out, suggesting a temporary lapse of justice. Spacing on the coin was certainly not a problem, so a reduction in claimed status may be implied.

The most numerous issues from mints outside of Fārs province represented in the hoard come from the province of Kirmān, immediately to the east. ‘Aḍud al-Dawla had secured this province from the Banū Ilyās in 356/966 and set up his son, Abu ‘l-Fawāris (later Sharaf al-Dawla, and always known on the coins with which we will deal as Shīrdīl b.

²¹ Muqaddasī, *Aḥsan al-Takāsim*, p. 434.

²² For 356: *BMC Oriental*, vol. 9, no. 663m.

‘Aḡud al-Dawla). The province of Kirmān was important for its mineral wealth and crafts. However, the province shared with the northern Jibāl a perennial insecurity and remained a buffer against the remnant Ṣaffārids in Sīstān and the Sāmānids (and later Ghaznavids). The four mints of Kirmān in the Fārs hoard seem to have been created during the Būyid rule, though they are located in the ancient district centers (*khurras*).

Bardasīr

This old town was developed when the Banū Ilyās governors made it their capital. It is located near the present city of Kirmān. The mint is represented in the hoard by three coins, two of which are previously unedited, 363 and 365.²³ The upper obverse field bears the letter *kāf*, perhaps for “Kirmān.”

Bamm

This town is located on the eastern edge of Kirmān province near the country of the Qufṣ and Balūch tribes and the Makrān coast. It was ‘Aḡud al-Dawla who first decisively subdued these robber tribes, opening the province to the commercial prosperity of the period. Bamm was known for the manufacture of cotton cloths.

The mint is very poorly known (only the issue of 362 has been published);²⁴ the hoard adds coins from the years 363, 365, 366 (both before and after Rukn al-Dawla’s death), and 368. The upper obverse field bears what may be a *bā*’, for “Bamm.”

Jīruft

The city of Jīruft was known principally for its fruit products and described by Ibn Ḥawqal as “the market of Khurāsān and Sīstān.”²⁵

²³ For 362: S. Lane-Poole, *Catalogue of the Collection of Arabic Coins in the Khedivial Library in Cairo* (London, 1897), p. 333; R. Vasmer, “Zur Geschichte und Münzkunde von ‘Oman im IX Jahrhundert,” *ZNum* 1927, p. 286.

²⁴ A. K. Markov, *Katalog . . . Ermitazh*, vols. 3–4 (St. Petersburg, 1900–1904), p. 927; Vasmer, “Peuth,” p. 286.

²⁵ Ibn Ḥawqal, *Kitāb al-Masālik*, p. 311.

It lay on the road from old Hurmuz, the port developed under the Sal-jūqs, and was probably the "city of Camadi" visited by Marco Polo. In the tenth century the city was larger than Iṣṭakhr. Two days journey north of Jiruft were the famous silver mines in the Jibāl al-Ma'ādin, but there is no indication when these mines were worked.²⁶

The mint is very poorly known and the issues of the hoard are all previously unattested. The issue of 365 is illustrated here (Cat. 244), a standard coin of the "adlī" type, as are two coins possibly dating to 372 (the reading is very uncertain). All of these early coins have a *jīm* in the upper obverse field. Two later coins date from 381, giving evidence of the continued attachment of the province to Būyid rule during the reign of Fakhr al-Dawla and Ṣamṣām al-Dawla.

Sirjān

Sirjān was the largest city in Kirmān province and the capital both before and after the fall of the Banū Ilyās. Muqaddasī describes it as being larger than Shīrāz.²⁷ Situated on the border of Fārs province, the city was the great market channeling the goods of the province westward.

The hoard contains only two coins from this mint; the first is an "adlī" from 361, illustrated here, Cat. 249, and the second is an uncertain issue of 367 (?).

ʿUmān

Beyond the province of Kirmān and the Strait of Hurmuz was the country of ʿUmān in Arabia. Following the death of Muʿizz al-Dawla in 357/967, Aḍud al-Dawla extended his control of the commerce in the Persian Gulf by taking over ʿUmān (he had contributed Sīrāfi ships to help Muʿizz al-Dawla capture the country a few years previously). Aḍud al-Dawla installed his second son, Marzubān (later Ṣamṣām al-Dawla) as governor in the chief city of Ṣuhār. The geographers of the tenth century have left descriptions of boatloads filled with "musk, silk, porcelain, jewels and precious stones and other wonderful

²⁶ Muqaddasī, *Aḥsan al-Takāsim*, p. 471.

²⁷ Muqaddasī, *Aḥsan al-Takāsim*, p. 460. For 361: S. Lane-Poole, "Fasti Arabici," NC 1886, p. 230.

Chinese merchandise,"²⁸ which entered this emporium. Muqaddasī characterized the city as "the hallway of China, the storehouse of the East and Iraq, and the stay of the Yemen."²⁹ In addition, there is recent archaeological evidence that local copper mines were intensively worked in this period.

The mint of 'Umān, almost certainly located in Ṣuḥār, operated under the Ṣaffārīds and the Wajīhīds, a local dynasty. The Būyīds took over the mint in 360 and their issues are well attested, with the exception of the year 366, which is found in the Fārs hoard and is a standard "adlī" type with Rukn al-Dawla's name still continued.³⁰ Although the Būyid garrison mutinied after 'Aḍud al-Dawla's death, Ṣuḥār remained under the domination of Fārs province as testified by the coins of 381 issued by Ṣamṣām al-Dawla with the names of both al-Ṭā'i' and al-Qādir (several of which might date to 382). Finally there is one coin, Cat. 262 illustrated here, which is inscribed as a "dinar." The coin is an "adlī" type similar to no. 254, but it bears an 'ayn (for 'Umān?) in the upper obverse field. Though the denomination is possibly an engraver's mistake, this coin might have been a gold plated counterfeit such as Miles has reported from Ahwāz.³¹

Madīnat al-Salām

The ships left 'Umān for Sirāf and thence to Baṣra and eventually Baghdād, known by its official name, Madīnat al-Salām. Only two coins from the Baghdād mint found their way into the hoard. The first, Cat. 263 illustrated here, dates to 352 and bears the names of Mu'izz al-Dawla and his son, 'Izz al-Dawla, on the reverse and Rukn al-Dawla on the obverse (discussed above, p. 162). The second coin is a more unusual and important one, dated 364 with Rukn al-Dawla and 'Aḍud al-Dawla, the latter bearing the title *al-malik al-'adl*, the earliest evidence of this new titlature. This coin documents the brief interval

²⁸ A. Williamson, *Sohar and Omani Seafaring in the Indian Ocean* (Muscat, 1973), p. 23.

²⁹ Muqaddasī, *Aḥsan al-Takāsim* p. 92.

³⁰ For 365: Vasmer, "Peuth," pp. 284-85.

³¹ G. C. Miles, "Trésor de dirhems du ix^e siècle," *Mémoires de la Mission Archéologique en Iran* 1960, p. 142.

in 364 when the misgovernment of 'Izz al-Dawla led to military intervention by 'Aḍud al-Dawla. 'Aḍud al-Dawla took the opportunity to depose 'Izz al-Dawla and assume power in Baghdād himself. This coin was probably used to pay the troops who helped in this revolt. His father, Rukn al-Dawla, who had ordered the relief of 'Izz al-Dawla from his enemies in the first place, now ordered 'Aḍud al-Dawla to reinstate 'Izz al-Dawla and return to Shīrāz. 'Aḍud al-Dawla was forced to comply and to await Rukn al-Dawla's death before he could return to Baghdād in 367. This coin may be compared to another issued during the political confusions of that same year which gives only the name of the caliph al-Ṭā'i and to a dinar which bears the names of 'Izz al-Dawla and 'Aḍud al-Dawla.³²

Nā'in

The last coin from the hoard discussed here (Cat. 265) is from the previously unrecorded mint of Nā'in. This town is located on the northern border of Fārs province and generally considered is a dependency of Iṣfahān. The issue dates to 348 and bears the name of 'Aḍud al-Dawla and must, therefore, have been under the jurisdiction of Fārs province. This small town is described by the geographers as being in the vicinity of silver mines, but again there is no indication of when these mines were worked. The coin bears three small punch marks.

MINTING IN FĀRS PROVINCE

A brief examination of the history of minting in Fārs province reveals a development during the early Islamic period in three stages.³³ (Fig. 3) From the Arab invasions until the resolution of the civil war following the death of Hārūn al-Rashīd, most of the mints in Fārs province seem to have been continuations of the traditional Sāsānian mints located in the district capitals. These mints struck long series of issues up to the 'Abbāsid takeover and slightly more sporadic and irregular issues

³² See *Istanbul . . . kataloğu*, no. 504.

³³ This outline is not intended as an exact or complete synthesis of the numismatic history of the region. Sporadic or questionable issues have generally been omitted.

25	105	200	254	320	372	400
ARDASHĪR						
IṢṬAKHR						
DARĀBJIRD						
SĀBŪR						
YAZD						
ARRAJĀN			ARRAJĀN	ARRAJĀN		
Fasā				FASĀ	FASĀ	
		FĀRS	FĀRS			
			JANNĀBĀ	JANNĀBĀ		
			SHĪRĀZ	SHĪRĀZ	SHĪRĀZ	
				SĪRĀF		
				KARD FANĀ	KARD FANĀ	
				KHUSRAW	KHUSRAW	
					KĀZARŪN	
				SĪRJĀN	SĪRJĀN	
				Huzū		
				Bardaslr		
				Bamm		
				Jiruft		
			‘UMĀN	‘UMĀN	‘UMĀN	
645	723	815	868	932	982	1009
“Umayyad”		“‘Abbāsīd”	“Ṣaffārīd”	“Būyīd”		“late Būyīd”

CAPITALS — long series of issues

. . . . — occasional issues

FIG. 3. Early Islamic Mints in Fārs and Kirmān

thereafter. From the time of al-Ma'mūn, a single mint named “Fārs,” probably located in Shīrāz, supplied the province (see p. 167). With the decline in the power of the caliphate, Fārs fell under the influence of the Ṣaffārīds of Sīstān. Shīrāz then seems to have been the location of two mints (that of “Fārs” and “Shīrāz”), a pattern repeated in the dual Būyīd mints of Shīrāz and Kard Fanā Khusraw. The Ṣaffārīds opened mints at Jannābā, a port southwest of Shīrāz, at Arrajān and in ‘Umān.

In the Būyīd period, beginning in the 320s, the mint of Fārs was discontinued, the Fasā mint was reopened and a new mint at Sīrāf

was begun. By the period of the Fārs hoard, there were long, well-established series of issues from Arrajān, Shīrāz, Kard Fanā Khusraw and Fasā, from the ports of Jannābā (discontinued during the period), Sirāf, 'Umān, and a short series from Huzū.³⁴ While Kirmān province had struck coins at earlier Sāsānian and then Umayyad mints (not shown here), new mints opened in the Būyid period were Sirjān, Bardasīr, Bamm and Jīruft. After the lacuna of the latter 370s most of these mints continued striking coins until the end of the Būyid period.

This analysis of the mint locations indicates an important transformation in the purpose of minting operations. The early mints were located strictly in governmental centers, first in district capitals and then completely centralized in Shīrāz (the Fārs mint). This locational pattern changed under the Ṣaffārids and the new pattern was expanded under the Būyids. The new mints were located in the ports and important regional production centers; and the capital held two mints, possibly that of the government center and that of the Sūq al-amīr (the industrial-trading center). Settlement in early Islamic Fārs province, and much of its economic history, fits the mercantile model developed by Vance, a geographical explanation of the effects of wholesaling enterprise.³⁵ Without going into the entire theory, one of the major tenets is that entrepôts are located on the regional peripheries and assume the dual functions of "transportation cities" for regional collection and manufacturing centers. The entrepôts are the foci for intelligence and control of marketing varia essential to wholesale merchandising. The letters of the Cairo Geniza bear abundant testimony to this type of trading during the period under discussion.³⁶

Though this phenomenon needs far more detailed study than is possible here, the location of mints in entrepôt cities may be linked with two dominant aspects of the mercantile system of the period: the needs of the international long distance trade of the Gulf and the structure of the early Islamic textile industry. Lowick has recently

³⁴ Lowick, "Trade Patterns," pp. 320-21.

³⁵ J. E. Vance, *The Merchant's World: The Geography of Wholesaling* (Englewood Cliffs, 1970).

³⁶ S. D. Goitein, *A Mediterranean Society*, vol. 1, *Economic Foundations* (Berkeley/Los Angeles, 1967), pp. 1-28 and *passim*.

described the mints on the shores of the Gulf in detail.³⁷ The mints of Sīrāf and ‘Umān played prominent roles in the great prosperity induced by this trade, a trade which brought luxury goods from the Far East for western markets, not to mention the Būyid capital of Shīrāz. The necessity of a local source of currency is not explained by the garrisons along the Gulf but rather as a means of facilitating exchange within the sūqs and warehouses of the port cities. Coinage was absolutely necessary as capital investment for partnerships (both ‘*inān* and *mufāwaḍa*) for commercial ventures.³⁸ According to most Islamic legal systems, the parity *mufāwaḍa* partnership as well as the *commenda* system preferred for the long distance trade could not be initiated on the basis of merchandise but on monetary capital, and, even then, the coinage involved had to be as standardized as possible.³⁹ Local minting on the Gulf was a short-term effort to encourage commerce by providing a regular cash flow for local ventures. The instability of the system is evident in the expense of importing bullion and the tendency of the coins to disperse quickly, as is demonstrated in the number of ‘Umānī coins of 381 in the hoard.⁴⁰

The same legal mechanisms applied, of course, to the overland caravan trade, but the commercial structure of the inland cities is more complicated due to active manufacturing centers. Foremost in the manufactures of the early Islamic period was the textile industry, which Goitein has likened to the steel industry in modern economies.⁴¹ The textile industry was marked by a great variety of products, colors, weaves, and durability, as well as styles in the finished articles of clothing. Fārs province was famous throughout the Islamic world for Sābūrī cloth (of Shīrāz) and Tawwazī cloth (of Kāzarūn); Fasā and Bamm also shared this reknown. The epitome of this industry was the

³⁷ Lowick, "Trade Patterns."

³⁸ A. L. Udovitch, *Partnership and Profit in Medieval Islam* (Princeton, 1970); see also his "Commercial Techniques in Early Medieval Islamic Trade," *Islam and the Trade of Asia*, ed. D. S. Richards (Oxford, 1970), pp. 37–62.

³⁹ Udovitch, *Partnership*, pp. 59, 177, *passim*.

⁴⁰ For comparison, see Lowick and Nisbet, "Hoard of Dirhems," pp. 231–40.

⁴¹ Goitein, *Mediterranean Society*, vol. 1, p. 101.

manufacture of the *ḡirāz* cloths.⁴² The *ḡirāz* organization was essentially a system of state factories for the manufacture of ceremonial cloth with embroidered inscriptions, specifically for robes of honor. One hears of a change in rule marked by the change of name "from the coinage, prayer, and *ḡirāz*-inscriptions."⁴³ The *ḡirāz* factories were the major manufactures set up by 'Aḡud al-Dawla at Kard Fanā Khusraw and at Kāzarūn. Ibn Balkhī has left a particularly interesting description of the latter:

The Rahbān water-channel [where the linens must be washed] is the property of the royal Treasury, and the custom is now established that the profit thereof belongs to the house of the *amīr* There is an inspector who oversees on behalf of the Treasury, and there are brokers who set a just price on the cloths, sealing the bales with a stamp before they are delivered to the foreign merchants . . . ; and in any city to which they [the bales] were carried, the certificate of the Kāzarūnī broker was merely asked for and the bale would then be sold at a profit without being opened. Thus it often happened that a load of Kāzarūnī bales would pass from hand to hand ten times over, unopened.⁴⁴

Thus *ḡirāz* products from the Treasury were used, to some extent, as a fiduciary currency; the regional location of these factories encouraged a decentralized pattern for the minting of coinage. This does not imply necessarily an interdependence of the mint and the *ḡirāz* factory, nor does it help in assessing the interrelationship of the mint and the *ḡirāz* with the state run warehouses (*dār al-wakāla*) and *sūqs*. In the light of these very preliminary observations on the commercial structures, some speculations may now be offered concerning the commercial role of the Fārs hoard.

⁴² The *tirāz* industry has been comprehensively studied in R. B. Serjeant, *Islamic Textiles: Material for a History Up to the Mongol Conquest* (Beirut, 1972).

⁴³ Serjeant, *Islamic Textiles*, p. 19.

⁴⁴ G. Le Strange, "Description of the Province of Fars, in Persia, at the Beginning of the Twelfth Century, A.D.," *Journal of the Royal Asiatic Society* 1912, p. 336.

METROLOGY AND COMMERCIAL ASPECTS
OF THE FĀRS HOARD

The silver dirhams of the Fārs hoard all show a certain amount of wear from circulation; two had been pierced, presumably for use as jewelry. The wear is naturally somewhat less for the coins of the later period. As has been noted, the coinage falls into two temporal groups, the earlier dating 347-71, mostly of the 360s, and the later from 380-82. The lacuna of almost ten years appears to be the result of a cessation of minting operations in Fārs rather than selectivity in the assemblage of the hoard.⁴⁵

Fig. 4 is a frequency table of coin weights (based on 0.2 g intervals with a curve derived from weighted column values). The curve for the entire hoard (A) and that of the earlier coins (B) are skewed to the left suggesting that, while there was a remarkably high tolerance in acceptable coin weights, there was a minimum weight, the 2.9 g standard for a dirham. This same minimum weight, below which a coin was "reluctantly" accepted, is true also for the coins of the later period. This later group of coins (C) shows the "bell curve" of a normal distribution that one would expect from a series of freshly-minted coins, though again the tolerance is very wide (which may account for the slight dip in the center of the curve). The difference between the two groups of coins graphically illustrates the effects of selective removal of the heavier coins for reminting or hoarding over the approximate 20 years separating the two coin groups.

Nevertheless the standard for the dirham was generally about 2.9 g and the hoard contains a significant percentage almost twice this weight; the heaviest coin is over 7 g. Clearly the number of coins, 272, was less important to the evaluation of the hoard than the weight. The total weight of the hoard is 1019.98 g (546 g of early coins; 473 g of later). If the two groups of coins had the same rate of exchange and

⁴⁵ This reduction of minting operations may represent an early symptom of the "silver famine" beginning in the eleventh century. See A. M. Watson, "Back to Gold—and Silver," *EconHistRev* 1967, pp. 1-34; and R. P. Blake, "The Circulation of Silver in the Moslem East Down to the Mongol Epoch," *Harvard Journal of Asiatic Studies* 1937, pp. 291-328.

number of coins

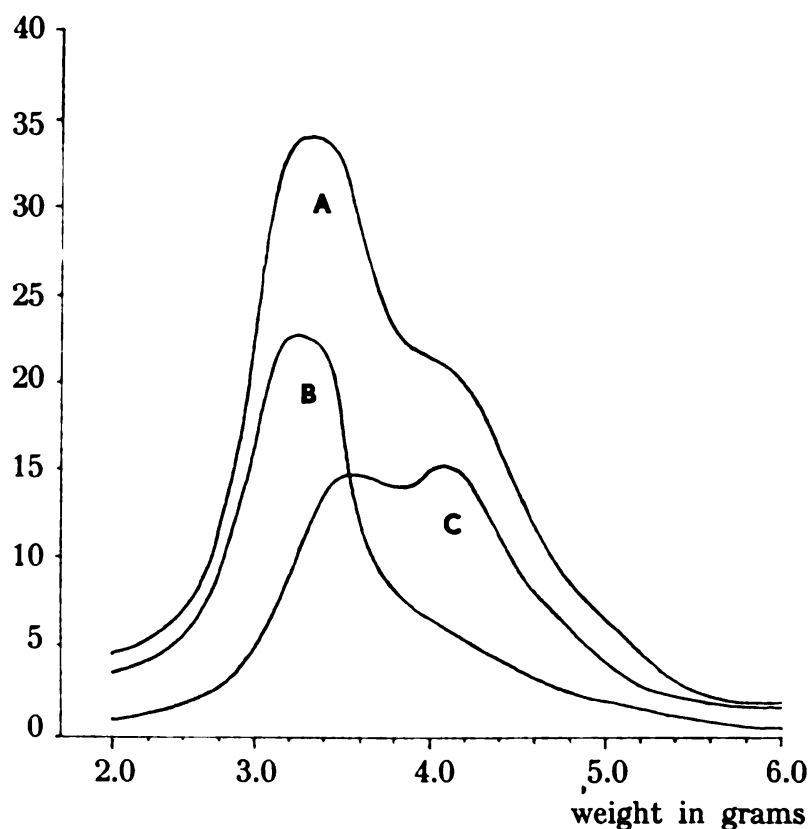


FIG. 4. Frequency Table for the Fārs Hoard.

A - distribution of weights for the entire hoard.**B** - coins of the early period, 347-72 H.**C** - coins of the later period, 380-82 H.

the rate of exchange in 382 fell between 20 and 30 dirhams to the dinar, the hoard might have been valued at 10 to 20 dinars.⁴⁶

This evaluation becomes important if one hypothesizes that the hoard is actually a purse assembled for a commercial transaction. (Iṣṭakhri states clearly that buying and selling were done entirely in dirhams in Fārs.)⁴⁷ Furthermore, Goitein specifies that in Fāṭimid Egypt, sealed purses were the most common form of handling money and

⁴⁶ Muqaddasī, *Aḥsan al-Takāsim*, p. 471.

⁴⁷ Iṣṭakhri, *al-Masālik*, p. 156.

that purses of 20 dinars were the most frequently mentioned (round sums of 10, 15, 25, and 30 dinars were also recorded).⁴⁸ In order to facilitate the exchange, not only the value of the coins had to be specified (determined by weight and assay), but the specific type of coin had to be recorded, that is, whether the coins were locally acceptable, legal tender. As has been noted already, the coins of the Fārs hoard seem to have been carefully selected, standard Būyid issues, half of which we have referred to as “*adlī*” issues. (see p. 166) An additional argument for this standardization of a “commercial” purse is found in Udovitch’s description of partnership capital in which he notes that “mixed in-

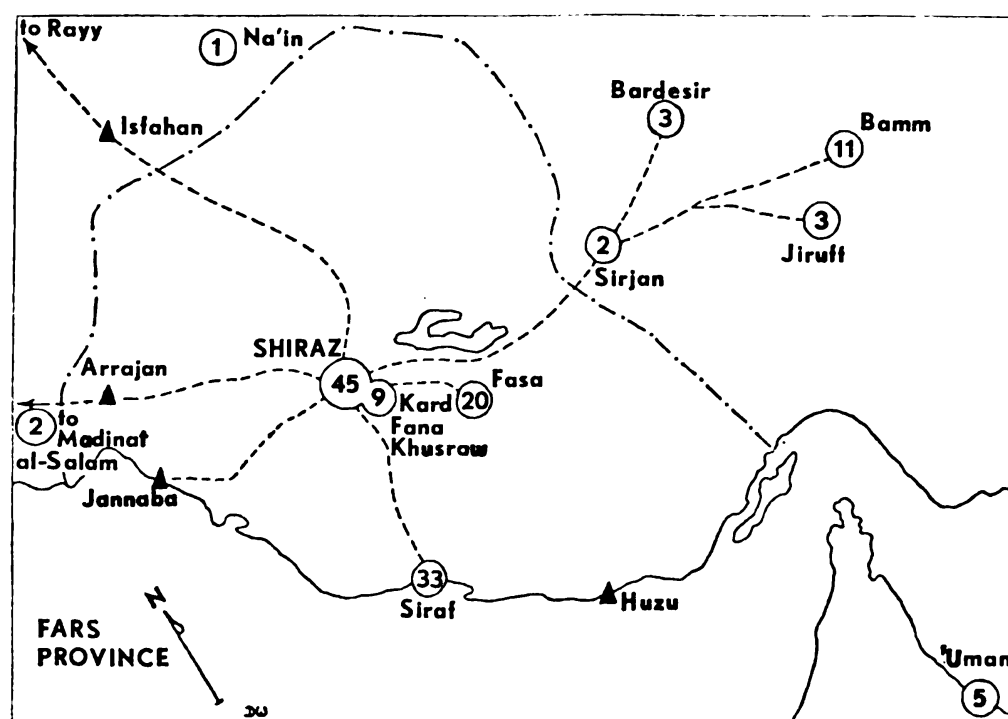


FIG. 5. Coin Distribution for the Early Period, 347-72 H.

▲ = Attested Mints Not Represented in the Hoard

⁴⁸ Goitein, *Mediterranean Society*, vol. 1, pp. 231, 233.

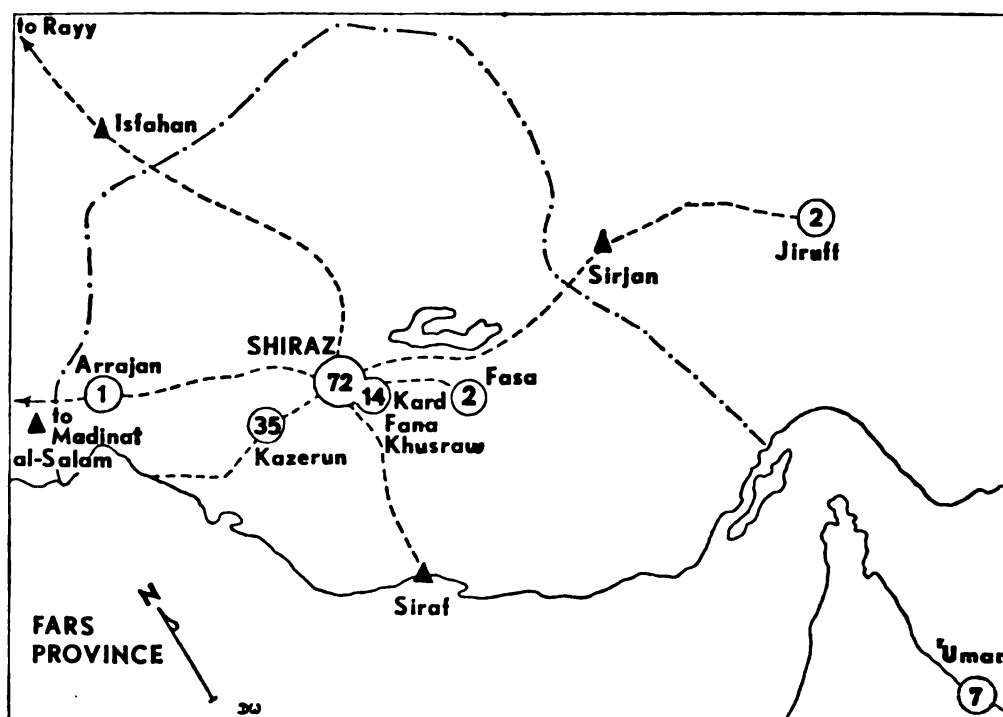


FIG. 6. Coin Distribution for the Later Period, 380-82 H.

▲ = Attested Mints Not Represented in the Hoard

vestments" were avoided as much as possible and the complete parity of the capital brought forth was the ideal. Again the homogeneity of the hoard is suggestive.⁴⁹

Finally we may turn to the composition of the hoard in regard to mint locations. The above speculations on the rationale of Būyid mint location were focused on two aspects of early Islamic commerce, the Gulf trade and the *ḥirāz* industry. Both of these aspects have a direct bearing on the composition of the hoard, especially manifest when the two temporal groups within the hoard are taken separately (see Figs. 5 and 6). The coins of the earlier group show the circulation pattern

⁴⁹ Udovitch, *Partnership*, pp. 55-60.

one might predict: the majority are from Shīrāz, the capital; stray issues are from distant mints of Baghdād and Nā'in (and perhaps the Kirmān mints); the comparatively large number of Sīrāf and 'Umānī issues confirm an involvement in the Gulf trade when these coins were added to the assemblage. The relatively numerous coins from Bamm and Fasā, both important textile manufacturing centers, likewise suggest an involvement in this second aspect of the commercial life of the region.

In both groups of coins, the ratio between Shīrāz and Kard Fanā Khusraw is a constant 5:1. As we have suggested earlier, the dual nature of these two mints may reflect a governmental—industrial/commercial division in monetary affairs. The later group of coins, of 380-82, shows a tighter concentration of mints as one would expect of recently-issued coins. Nevertheless, the earlier patterns are repeated: a significant number of coins from the mint in 'Umān indicate the maintenance of links with the Gulf (the absence of issues from Sīrāf is unexpected and puzzling); the limited issues of the Kāzarūn mint, the location of the *ṭirāz* factory, are well represented in the hoard; and again stray coins from Jīruft and Arrajān add a normal random feature of ordinary currency circulation.

In sum, the Fārs hoard is a carefully-composed assemblage of coins, most likely a sealed purse of specific value. The distribution of coin types and mint issues offers a synthesis of currency patterns in Fārs province during the Būyid period. This purse remains as the material reflection of a mediaeval commercial transaction, on the precise nature of which we may only speculate.

CATALOGUE

The catalogue is arranged by mints in Arabic alphabetical order, beginning with those mints within Fārs province and then those from peripheral areas. An attempt has been made to order the coins according to die links and stylistic seriation. All dates are in Hijrī years.

FĀRS PROVINCE

Arrajān

1. 381.

Obv.: لا اله الا الله

وحده لا شريك له

صمصام الدولة

وشم الملة

Rev.: لله

بمحمد

رسول الله

صلى اله

عليه وسلم

الطائع لله

double struck

margin: mint and date
pointillate circle
5 annulets

margin: pointillate
circle

Qur'an IX, 33

3.505 g √ 22 mm (PLATE XIV)

Sīrāf

2. 347. *Obv.:* لا اله الا الله
وحده لا شريك له
ركن الدولة ابو على
ف
- Rev.:* لله
محمد رسول
الله المطيع لله
الا مير العدل عضد الدولة
ابو شجاع
- margin: mint and date
pointillate circle
solid line circle
7 double annulets
pointillate circle
- double struck
margin: double
pointillate
circle
Qur'an IX, 33
pointillate
circle
- 5.244 g ↘ 28 mm
3. 347? *Obv.:* as 2
- Rev.:* double struck and
severely cracked
- 2.805 g ↗ 24 mm (PLATE XIV)
4. 348. *Obv.:* ○
لا اله الا الله
وحده لا شريك له
ركن الدولة ابو على
ف
- Rev.:* لله
محمد رسول الله
المطيع لله
الا مير العدل عضد الدولة
ابو شجاع
✽
- margin: mint and date
pointillate circle
5 double annulets
pointillate circle
- margin: as 2
- 2.554 g ↘ 26 mm

5. 350. *Obv.:* لا اله الا الله
 وحده لا شريك له
 ركن الدولة
 ابو على
- Rev.:* لله
 محمدرسول الله
 المطيع لله
 الامير العدل
 عضد الدولة
 ابو شجاع
 د

double struck
 margin: mint and date
 double pointillate
 circle
 4 double annulets
 pointillate circle

double struck
 margin: as 2

3.178 g ↘ 25 mm


6. 356. *Obv.:* ❄
 as 5
 ❄
- Rev.:* as 5

margin: mint and date
 single pointillate
 circle
 4 double annulets
 pointillate circle

margin: single pointil-
 late circle
 Qur'an IX, 33

2.366 g ↘ 24 mm

7. 356. *Obv.:* —○
 as 5
- Rev.:* as 5 ;
 double struck
- margin : mint and date only
- margin: as 6
- 3.143 g ↘ 25 mm

8. 356. *Obv.*:  *Rev.*: as 5
same die as 7



margin: pointillate
circle
Qur'an IX, 33
pointillate
circle

3.212 g ↗ 26 mm

9. 357. *Obv.*:  *Rev.*: as 5
as 5




margin: mint and date margin: as 6
pointillate circle
5 annulets with center pellet

3.684 g ↗ 25 mm (PLATE XIV)

10. 357. *Obv.*:  *Rev.*: as 5
as 5












margin: as 9 margin: as 6



2.550 g ↗ 25 mm

11. 359. *Obv.*:  *Rev.*: as 5
as 5


margin: mint and date margin: as 8
pointillate circle
5 annulets

3.505 g ↘ 23 mm


12. 361. *Obv.*: 
as 5

margin : as 11
3.291 g ↓ 26 mm (PLATE XIV) *Rev.*: as 5
margin: as 6
13. 361. *Obv.*: 
as 5

margin: as 11
2.616 g ↙ 26 mm *Rev.*: as 5
margin: as 6
14. 361. *Obv.*: 
same die as 12

margin: as 6
3.898 g ↙ 26 mm *Rev.*: as 5;
double struck
15. 362. *Obv.*: 
as 5

margin: as 11
3.068 g ↙ 26 mm *Rev.*: as 5;
cracked die
margin: as 6
16. 363. *Obv.*: 
as 5

margin : as 11
3.129 g ↗ 26 mm *Rev.*: as 5
margin: as 6

17. 363. *Obv.:* 
same die as 16


Obv.: as 5

margin: as 6

4.311 g ← 26 mm


18. 365. *Obv.:* 
as in 5;
double struck

Rev.: لله
محمد رسول الله
الطائع لله
الملك العدل
عضد الدولة
ابوشجاع

margin: as 6

margin: as 11

2.280 g ↗ 28 mm


19. 365. *Obv.:* 
field effaced

Rev.: field effaced

margin: as 11


margin: as 6

3.504 g ↘ 26 mm

20. 365. *Obv.:* 
same die as 18;
double struck








Rev.: same die as 18;
double struck






4.426 g ↙ 26 mm

21. 365. *Obv.:* 
same die as 18;


Rev.: same die as 18

4.424 g ↘ 26 mm

22. 365? *Obv.*:  *Rev.*: as 18
 as 5
 margin: as 11 margin: as 6
 3.987 g ↙ 26 mm
23. 365. *Obv.*:  *Rev.*: same die as 18;
 same die as 22 double struck
 2.636 g ↙ 26mm
24. 365. *Obv.*:  *Rev.*: same die as 18
 same die as 18;
 double struck
 3.528 g ↘ 27 mm
25. 365. *Obv.*:  *Rev.*: same die as 22;
 same die as 22 double struck
 3.393 g ↘ 26 mm
26. 365. *Obv.*:  *Rev.*: same die as 18;
 same die as 18 double struck
 3.142 g ↘ 26 mm
27. 365? *Obv.*:  *Rev.*: same die as 22;
 same die as 22 double struck
 2.248 g ↙ 27 mm
28. 365. *Obv.*: as no. 5 *Rev.*: as 18
 
 margin: as 11 margin: as 6
 3.079 g ↗ 28 mm

29. 365. *Obv.*: 
same die as 22
3.194 g ↗ 26 mm
Rev.: same die as 22;
double struck
30. 365. *Obv.*: same die as 28

4.834 g ↘ 28 mm
Rev.: same die as 28;
double struck
31. 366. *Obv.*: 
as 5
بويه
margin: as 11
2.515 g ↓ 27 mm
Rev.: as 18
margin: as 6
32. 366. *Obv.*: 
as 5
بويه
margin: as 11
3.597 g ↙ 27 mm
Rev.: as 18
margin : as 6;
double struck
33. 371. *Obv.*: 
لا اله الا الله
وحده لا شريك له
الملك العدل عضد
الدولة و تاج الملة
ابو شجاع
margin: pointillate circle
mint and date
6.461 g ↗ 28 mm (PLATE XIV)
Rev.: لله
محمد رسول الله
صلى الله
عليه وسلم
الطائع لله
margin: as 6

34. 37x.

Obv.: 
as 33

margin: as 33

3.330 g ↘ 25 mm

Rev.: لله

محمد
رسول الله
صلى الله
عليه وسلم
الطائع لله

margin: double solid
line circle
Qur'an IX, 33

Shīrāz

35. 355.

Obv.: ع
لا اله الا الله
وحده لا شريك له
ركن الدولة
ابو على

margin: mint and date
pointillate circle
4 pairs of annulets


4.783 g ↗ 24 mm (PLATE XIV)

Rev.: لله

محمد رسول الله
الطبيع لله
الامير العدل
عضد الدولة
ابو شجاع

margin: pointillate
circle
Qur'an IX, 33

36. 357.

Obv.: 
as 35
بويه











margin : effaced

3.100 g ↘ 24 mm











Rev.: ف
as 35











margin: as 35

37. 357. *Obv.*: اِس
as 35
بويه
margin: mint and date
pointillate circle
5 annulets
3.397 g ↗ 24 mm
38. 358. *Obv.*: اِس
as 35
بويه
margin: as 37
3.067 g ↗ 24 mm
39. 359. *Obv.*: اِس
as 35
بويه
margin: as 37
3.007 g ↗ 25 mm
40. 359. *Obv.*: اِس
as 35
بويه;
double struck
margin: as 37
2.890 g ↘ 25 mm
- Rev.*: ف
as 35;
double struck
margin: as 35
- Rev.*: ف
as 35
margin: as 35
- Rev.*: ف
as 35;
double struck
margin: as 35











41. 359. *Obv.*:  *Rev.*: 
as 35 as 35
بويه
margin: as 37 margin: as 35
3.308 g ↗ 24 mm (pierced) (PLATE XIV)
42. 360. *Obv.*:  *Rev.*: 
as 35 as 35;
بويه double struck
margin: as 37 margin: as 35
3.218 g ↘ 25 mm
43. 360. *Obv.*:  *Rev.*: 
as 35 as 35
بويه
margin: as 37 margin: as 35
3.491 g ↘ 26 mm
44. 360. *Obv.*:  *Rev.*: 
same die as 42 as 35
بويه
margin: as 35
3.466 g ↘ 25 mm
45. 360. *Obv.*:  *Rev.*: 
as 35 as 35
بويه
margin: as 37 margin: as 35
3.541 g ↘ 25 mm




46. 360. *Obv.:* *Rev.:*
as 35 as 35
بویه
margin: as 37
3.129 g ↗ 25 mm
47. 360. *Obv.:* *Rev.:*
same die as 43 as 35
بویه
margin: as 35
3.367 g ↓ 25 mm
48. 361. *Obv.:* *Rev.:*
as 35 as 35
بویه
margin: as 37
3.370 g ↘ 26 mm
49. 361. *Obv.:* *Rev.:*
as 35 as 35
بویه
margin: as 37
margin: as 35
50. 361. *Obv.:* *Rev.:*
as 35 as 35
بویه
margin: as 37
margin: as 35
3.288 g ↗ 26 mm

51. 361. *Obv.:*  *Rev.:* 
 same die as 50 as 35
 بويه
 margin: as 35
 3.909 g ↙ 24 mm
52. 361. *Obv.:*  *Rev.:* 
 as 35 as 35
 بويه
 margin: as 37 margin: as 35
 2.507 g ↙ 26 mm
53. 361. *Obv.:*  *Rev.:* 
 as 35 same die as 48
 بويه
 margin: as 37
 3.110 g ↘ 26 mm
54. 361. *Obv.:*  *Rev.:* 
 as 35 as 35
 بويه
 margin: as 37 margin: as 35
 3.327 g ↘ 26 mm
55. 361. *Obv.:*  *Rev.:* 
 same die as 49 as 35; small die
 بويه break 5:00
 margin: as 35
 2.971 g ↙ 26 mm




56. 361. *Obv.*:  *Rev.*: 
 same die as 48 same die as 51
 بويه
 3.259 g ← 27 mm
57. 361. *Obv.*:  *Rev.*: 
 same die as 55 as 35;
 بويه die breaks at
 7:00, 10:00
 margin: as 35
 2.937 g ↑ 26 mm
58. 361. *Obv.*:  *Rev.*: 
 as 35 as 35
 بويه
 margin: as 37
 3.810 g ↙ 26 mm
59. 361. *Obv.*:  *Rev.*: 
 same die as 48 same die as 48
 بويه
 3.875 g ↘ 25 mm
60. 361. *Obv.*:  *Rev.*: 
 as 35 same die as 58
 بويه
 double struck
 margin: as in 37
 4.320 g ↗ 28 mm

61. 361. *Obv.*: اى
 as 35
 بويه
 margin: as 37
 1.551 g ↗ 28 mm (pierced)
62. (361). *Obv.*: اى
 same die as 48
 بويه
 margin: as 35
 3.687 g ↓ 27 mm
63. Mint effaced 361.
 Obv.: اى
 as 35
 بويه
 margin: as 37
 3.995 g ↓ 26 mm
64. 362. *Obv.*: اى
 as 35
 بويه
 margin: as 37
 3.440 g ↘ 26 mm
- Rev.*: ف
 as 35
 margin: as 35
- Rev.*: ف
 as 35
 margin: as 35
- Rev.*: ف
 as 35
 margin: as 35
- Rev.*: ف
 as 35
 margin: as 35



65. 362. *Obv.:* 
as 35;
double struck
𐭠𐭥𐭥
margin: as 37
3.201 g ↘ 26 mm
66. 362. *Obv.:* 
as 35
𐭠𐭥𐭥
margin: as 37
3.341 g ↘ 25 mm
67. 362. *Obv.:* 
as 35
𐭠𐭥𐭥
margin: as 37
3.202 g ↗ 26 mm
68. 362. *Obv.:* 
as 35

margin: as 37
3.792 g ↘ 27 mm
- Rev.:* 
as 35
margin: as 35
- Rev.:* 
as 35;
double struck
margin: as 35
- Rev.:* 
as 35
margin: as 35
- Rev.:* 
as 35

margin: as 35

69. 362. *Obv.*:  *Rev.*: 
 same die as 67 as 35;
 بويه double struck

 margin: as 35


3.525 g ↘ 26 mm

70. 362. *Obv.*:  *Rev.*: 
 same die as 66 as 35
 بويه 
 margin: as 35



4.021 g ↗ 26 mm

71. 363. *Obv.*:  *Rev.*: 
 as 35 as 35
 بويه
 margin: as 37 margin: as 35











4.204 g ↘ 26 mm

72. 363. *Obv.*:  *Rev.*: 
 as 35 same die as 71
 بويه
 margin: as 37

2.619 g ↗ 25 mm

73. 363. *Obv.*:  *Rev.*: 
 as 35 same die as 71
 بويه
 margin: as 37

3.013 g ↘ 25 mm

74. 363. *Obv.:*  *Rev.:* 
 same die as 73 same die as 71
 بویه
 3.223 g ↘ 25 mm
75. 363. *Obv.:*  *Rev.:* 
 as 35 as 35
 بویه
 margin: as 37 margin: as 35
 3.567 g ↗ 25 mm
76. 363. *Obv.:*  *Rev.:* 
 as 35 as 35
 بویه
 margin: as 37 margin: as 35
 2.900 g ↑ 26 mm
77. 363. *Obv.:*  *Rev.:* 
 as 35;
 double struck as 35
 بویه
 margin: as 37 margin: as 35
 3.380 g ↗ 25 mm (PLATE XIV)
78. 363. *Obv.:*  *Rev.:* 
 as 35 same die as 75
 بویه
 margin: as 37
 3.721 g ↘ 25 mm

79. 364. *Obv.:* 
as 35
بويه
Rev.: 
as 35;
double struck


margin: as 37

margin: as 35

3.096 g ↙ 26 mm


80. Shīrāz (?) 380.

Obv.: لا اله الا الله
وحده لا شريك له
الطائع لله
فخر الدولة وملك
الامة
Rev.: لله
محمد رسول الله
الملك العدل
صمصام الدولة
وشم الملة
ابو كاليجار
double struck

margin: mint and date
pointillate circle
5 single pellets

margin: as in 35

3.604 g ↘ 25 mm

81. 381. *Obv.:* لا اله الا الله
وحده لا شريك له
الطائع لله
فخر الدولة
وفلك الامة
double struck
Rev.: لله
as 80

double struck

margin: mint and date
pointillate circle
? annulets


margin: as 35

6.715 g ↗ 25 mm


82. 381. *Obv.*: as 81;
double struck

margin: as 81
2.675 g ↙ 23 mm
- Rev.*: الله
as 80;
die break at
10:00

margin: as 35
83. 381. *Obv.*: as 81

margin: ?
2.566 g ↙ 22 mm
- Rev.*: 
as 80

margin: ?
84. 381. *Obv.*: as 81;
die break at 10:00

margin: mint and date
pointillate circle
5 annulets
3.974 g ↙ 24 mm
- Rev.*: الله
as 80


margin: as 35
85. 381. *Obv.*: same die as 84;
double struck

3.591 g ↙ 26 mm
- Rev.*: الله
as 80
و

margin: as 35
86. 381. *Obv.*: same die as 84

3.748 g ↗ 23 mm
- Rev.*: الله
same die as 85

87. 381. *Obv.*: same die as 84;
double struck

Rev.: الله
as 80

margin: as 35

3.032 g ↗ 25 mm

88. 381. *Obv.*: same die as 84

Rev.: الله
same die as 85
ن

3.947 g ↘ 25 mm

89. 381. *Obv.*: as 81

○

Rev.: الله
same die as 85
ن

margin: as 81

3.766 g ↘ 24 mm

90. 381. *Obv.*: same die as 84

Rev.: الله
as 80

margin: ?

4.408 g ↘ 24 mm

91. 381. *Obv.*: ج
as 81

•

Rev.: ■
as 80;
double struck

margin: as 80

3.474 g ↘ 24 mm

margin: as 35

92. 381. *Obv.*: Ɱ *Rev.*: Ɱ
 same die as 91 as 80
 •
 margin: as 35
 3.101 g ↗ 25 mm
93. 381. *Obv.*: Ɱ *Rev.*: Ɱ
 same die as 91 as 80
 •
 margin: as 35
 3.691 g ↗ 25 mm
94. (Shīrāz) 381.
 Obv.: as 81 *Rev.*: Ɱ
 as 80
 Ɱ
 margin: as 80 margin: ?
 3.977 g ↗ 23 mm
95. (Shīrāz) 381.
 Obv.: Ɱ *Rev.*: Ɱ
 as 81 as 80
 Ɱ
 margin: as 80 margin: as 35
 3.677 g ↗ 24 mm

96. (Shīrāz) 381.

Obv.: as 81*Rev.*: الله

as 80



margin: as 80

margin: as 35

4.199 g ↘ 23 mm

97. 381.

Obv.: as 81*Rev.*: الله

same die as 96



margin: as 80

4.291 g ↗ 25 mm

98. 381.

Obv.: ○*Rev.*: ■

as 81

same die as 96



margin: as 80

3.718 g ↘ 24 mm





















99. 381.

Obv.: as 81*Rev.*: الله


same die as 96

margin: mint and date
pointillate circle
4 annulets

3.771 g ↘ 25 mm

100. 381. *Obv.*: 
as 81

margin: as 99
4.393 g ↙ 26 mm
- Rev.*: 
same die as 96

101. 381. *Obv.*: 
same die as 100

4.008 g ↗ 22 mm
- Rev.*: 
same die as 94

102. (Shirāz) 381. *Obv.*: 
same die as 100

3.986 g ↗ 24 mm
- Rev.*: 
as 80

margin: as 35
103. 381. *Obv.*: 
same die as 100

2.925 g ↗ 25 mm
- Rev.*: 
as 80

margin: as 35
104. 381. *Obv.*: 
as 81

margin: as 99
3.634 g ↙ 26 mm (PLATE XV)
- Rev.*: 
as 80

margin: as 35

105. 381.

Obv.: 

same die as 104

*Rev.:* 


as 80



margin: as 35

3.392 g ↙ 24 mm

106. (Shīrāz) 381.

Obv.: 

as 81



margin: as 99

3.446 g ↙ 25 mm


Rev.: 

as 80



margin: as 35

107. 381.

Obv.: 

same die as 104

*Rev.:* 


as 80



margin: as 35

3.501 g ↗ 25 mm

108. 381.

Obv.: 

same die as 104




4.546 g ↗ 25 mm

Rev.: 


same die as 87;

double struck

109. 381.

Obv.: 

same die as 104
















*Rev.:* 

as 80;

double struck





3.639 g ↗ 25 mm

110. 381. *Obv.*:  as 81
 °
 margin: as 99
 3.259 g ↘ 25 mm
- Rev.*:  as 80

 margin: as 35
111. 381. *Obv.*:  as 81
 ○
 margin: as 99
 4.036 g ↘ 25 mm
- Rev.*:  as 80

 margin: as 35
112. 381. *Obv.*:  as 81
 ○
 margin: ?
 3.524 g ↗ 25 mm
- Rev.*:  same die as 85

113. 381. *Obv.*:  as 81
 . ○
 margin: as 99
 4.644 g ↘ 25 mm
- Rev.*:  as 80

 margin: as 35
114. 381. *Obv.*:  same die as 113
 ○
 3.285 g ↘ 23 mm
- Rev.*:  as 80

 margin: as 35

115. 381. *Obv.*: ☪
 same die as 113
 ☉
 4.138 g ↗ 25 mm
116. 381. *Obv.*: ☪
 same die as 113
 ☉
 4.008 g ↗ 24 mm
117. 381. *Obv.*: ☪
 same die as 113
 ☉
 4.862 g ↗ 24 mm
118. 381. *Obv.*: ☪
 same die as 95
 3.927 g ↗ 25 mm
119. 381. *Obv.*: ☪
 as 81
 ○
 margin: mint and
 underlying
 reverse margin
- Rev.*: لله
 same die as 103
 ☉
- Rev.*: لله
 same die as 113
 ☪
- Rev.*: لله
 same die as 103
 ☉
- Rev.*: لله
 as 80
 ☪
- margin: only under-
 lying obverse
 margin
- This restruck coin appears to be over an identical issue.
- 7.077 g ↘ 26 mm

120. 381. *Obv.*: ☪
 as 81
 ☉
 margin: ?
 3.217 g ↗ 24 mm
121. 381. *Obv.*: ☪
 same die as 120
 ☉
 3.524 g ↘ 24 mm
122. 381. *Obv.*: ☪
 same die as 120
 ☉
 4.103 g ↘ 25 mm
123. 381. *Obv.*: ☪
 لا اله الا الله
 وحده لا شريك له
 القادر بالله
 فخر الدولة
 وفلك الامة
 ○
 double struck
 margin: mint and date
 pointillate circle
 4 pairs of annulets
 3.904 g ↗ 23 mm
- Rev.*: لله
 as 80
 °
 margin: as 35
- Rev.*: اله
 as 80
 margin: as 35
- Rev.*: لله
 as 80
 double struck
 ○
 margin: ?


124. 381.

Obv.: same die as 123;
double struck*Rev.:* as 80;
double struck

margin: as 35

4.865 g ↙ 26 mm

125. 381.

Obv.: 

same die as 123




4.025 g ↗ 25 mm

Rev.: 

same die as 124


126. (Shīrāz) 381.

Obv.: 

same die as 123




4.299 g ↗ 25 mm

Rev.: 

same die as 123

127. (Shīrāz) 381.

Obv.: 

as 123



margin: as 123

3.515 g ↗ 25 mm


Rev.: 

as 80




margin: as 35

128. (Shīrāz) 381.

Obv.: 

same die as 123

*Rev.:* 


as 80




margin: as 35

3.494 g ↙ 23 mm (PLATE XV)

129. (Shīrāz) 381.

Obv.: 

same die as 123


*Rev.*: 

as 80


margin: as 35

4.116 g ↙ 25 mm

130. 381.

Obv.: 


as 123

*Rev.*: as 80;
double struck


margin: as 35

4.711 g ↗ 25 mm

131. 381.

Obv.: 


same die as 130

*Rev.*: 


same die as 124

5.025 g ↗ 25 mm

132. 381.

Obv.: 

same die as 130


*Rev.*: 

as 80


margin: as 35

4.209 g ↗ 27 mm

133. 381.

Obv.: 

as 123

*Rev.*: 

as 80



margin: as 35

3.587 g ↗ 25 mm

134. 381.

Obv.: ☪*Rev.*: ☩☩☩

same die as 133

as 80



margin: as 35

4.181 g ↗ 26 mm (PLATE XV)

135. 381.

Obv.: ☪*Rev.*: ☩☩☩

same die as 130

same die as 134



6.217 g ↘ 25 mm

136. 382.

Obv.: ☩☩☩*Rev.*: ☩☩☩☩☩

as 123

as 80;
double struck

margin: as 123

margin: as 35

3.336 g ↘ 27 mm

137. 382.

Obv.: ☪*Rev.*: ☩☩☩☩☩

as 123


same die as 136



margin: as 123

4.237 g ↗ 25 mm

138. Shīrāz (?) 382.


Obv.: 

as 123

.

margin: mint and date
pointillate circle
4 single annulets


3.248 g ↙ 26 mm

Rev.: as 80;
double struck

.

margin: as 35


139. 382.

Obv.: 

as 123

margin: as 138?


4.446 g ↙ 25 mm

Rev.: 

as 80


margin: ?

140. 382.


Obv.: 

same die as 139

4.958 g ↘ 25 mm

Rev.: same die as 139;
double struck

141. 382.


Obv.: 

as 123

.

margin: as 138?

2.981 g ↘ 24 mm


Rev.: 

as 80




margin: as 35

142. 382.

Obv.: 


same die as 139



5.213 g ↙ 25 mm

Rev.: 

same die as 139

143. (Shīrāz) 382.

Obv.: 
as 123



Rev.: 
as 80




margin: mint and date
pointillate circle
? pairs of annulets

margin: as 35

2.791 g ↘ 24 mm

144. (Shīrāz) 382.

Obv.: 
as 123



Rev.: 
as 80




margin: as 143

margin: as 35

4.185 g ↗ 25 mm

145. (Shīrāz) 382.

Obv.: 
as 123

Rev.: 
as 80




margin: mint and date
pointillate circle
4 pairs of annulets

margin: as 35

4.363 g ↗ 25 mm

146. 3xx (380?)


Obv.: as 80

Rev.: 
same die as 113


margin: ?

3.210 g ↗ 24 mm

147. (Shīrāz) 38x (380 ?)


Obv.: 

as 80;

double struck

margin: as 80

1.484 g ↗ 25 mm

Rev.: 


as 80



margin: as 35

148. (Shīrāz) 38x (380 ?)

Obv.: same die as 147


Rev.: 

as 80

margin: as 35

3.224 g ↗ 25 mm


149. (Shīrāz) 38x (380 ?)

Obv.: 

as 80


margin: ?

4.525 g ↗ 25 mm

Rev.: 

same die as 148


150. (Shīrāz ?) 381.

Obv.: 

as 81

margin: as 80

3.267 g ↘ 23 mm

Rev.: 

as 80

margin: as 35

151. (Shīrāz ?) 3xx (381 ?).

Obv.: ☪

as 81

margin: as 81

4.545 g ↘ 23 mm

Rev.: لله

as 80



margin: as 35

Fasā

152. 354.

Obv.: لا اله الا الله

وحده لا شريك له

ركن الدولة

ابو على

double struck

margin: mint and date
pointillate circle
4 pairs of annulets

3.443 g ↗ 24 mm

153. 355.

Obv.: ○

as 152

margin: as 152

2.950 g ↘ 25 mm

Rev.: لله

محمدرسول الله

المطيع لله

الامير العدل

عضد الدولة

ابوشجاع

double struck;


die break at


4:00

margin: pointillate
circle
Qur'an IX,
33*Rev.*: لله



as 152


margin: as 152


154. 358. *Obv.*:  as 152;
double struck



margin: mint and date
pointillate circle
5 annulets


3.500 g ↗ 25 mm
155. 358. *Obv.*: d same die as 154




3.242 g ↗ 26 mm (PLATE XV)
156. 359. *Obv.*:  as 152



margin: as 154

3.247 g ↘ 26 mm
157. 361. *Obv.*:  as 152;
double struck












margin: as 154














3.270 g ↘ 25 mm
- Rev.*:  as 152;
die break at
11:00






margin: as 152
- Rev.*:  same die as 154
- Rev.*:  as 152

margin: as 152
- Rev.*:  as 152

margin: as 152

158. 361. *Obv.*: 
as 152

margin: as 154
3.739 g → 27 mm
- Rev.*: لله
as 152
margin: as 152
159. 361. *Obv.*: 
as 152;
double struck

margin: as 154
3.174 g ↙ 27 mm
- Rev.*: لله
same die as 158
160. 361. *Obv.*: 
as 152

margin: as 154
3.329 g ↗ 27 mm
- Rev.*: لله
as 152
margin: as 152
161. 361. *Obv.*: 
same die as 157

3.774 g ↙ 26 mm
- Rev.*: لله
same die as 157;
double struck
162. (Fasā) 361. *Obv.*: 
as 152

margin: as 154
5.151 g ↗ 26 mm
- Rev.*: ف
as 152
margin: as 152


163. 362. *Obv.*: 
as 152

margin: as 154
4.339 g ↙ 26 mm
164. 363. *Obv.*: 
as 152

margin: as 154
3.164 g ↗ 26 mm
165. 363. *Obv.*: 
as 152;
double struck

margin: as 154
2.868 g ↗ 26 mm
166. 363. *Obv.*: 
as 152

margin: as 154
3.820 g ↙ 26 mm
- Rev.*: 
same die as 157
- Rev.*: 
as 152
margin: as 152
- Rev.*: 
as 152
margin: as 152
- Rev.*: 
as 152

margin: as 152

167. 365. *Obv.*:  as 152;
double struck
margin: as 154
2.307 g ↙ 26 mm
- Rev.*: لله
محمدرسول الله
الطائع لله
ملك العدل
عضد الدولة
ابوشجاع
margin: as 152
168. 365. *Obv.*:  as 152
margin: as 154
3.489 g ↗ 26 mm
- Rev.*: لله
as 167
⊙
margin: as 152
169. 365. *Obv.*:  same die as 168
3.833 g ↘ 25 mm
- Rev.*: لله
same die as 168
⊙
170. 365. *Obv.*:  same die as 168
2.689 g ← 26 mm
- Rev.*: لله
same die as 168
⊙
171. 365. *Obv.*:  same die as 167
4.075 g ↓ 24 mm (PLATE XV)
- Rev.*: لله
as 167
margin: as 152

For two further coins from the Fasā mint, see Addendum, nos. 271, 272.

Kāzarūn

172. 381.


Obv.: 

لا اله الا الله
وحده لا شريك له
الطائع لله
فخر الدولة
وفلك الامة

margin: mint and date
pointillate circle
4 annulets

5.980 g ← 26 mm


173. 381.

Obv.: 

same die as 172;
overstruck

3.669 g → 26 mm

174. 381.


Obv.: 

as 172

margin: as 172

5.712 g ↗ 25 mm

Rev.: لله

محمد رسول الله
الملك العدل
صمصام الدولة
وشمس الملة
ابو كاليجار


double struck

margin: pointillate
circle
Qur'an IX,
33

Rev.: لله


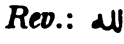



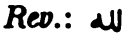



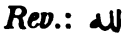



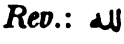



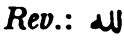



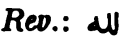


same die as 172



















*Rev.:* لله

as 172




margin: as 172


175. 381. *Obv.*:  *Rev.*: 
 same die as 172 same die as 172;
 double struck

 4.097 g  24 mm
176. 381. *Obv.*:  *Rev.*: 
 same die as 172 same die as 172

 5.906 g  24 mm
177. 381. *Obv.*:  *Rev.*: 
 same die as 174;
 double struck same die as 174;
 double struck

 4.307 g  26 mm
178. 381. *Obv.*:  *Rev.*: 
 same die as 174 same die as 174

 3.467 g  26 mm
179. 381. *Obv.*:  *Rev.*: 
 same die as 172 same die as 172

 3.995 g  26 mm
180. 381. *Obv.*:  *Rev.*: 
 same die as 174 same die as 172

 3.641 g  22 mm

181. 381. *Obv.*:  same die as 172
4.482 g ↘ 26 mm
Rev.:  same die as 174

182. 381. *Obv.*:  same die as 172
2.904 g ↗ 24 mm
Rev.:  same die as 172

183. 381. *Obv.*:  same die as 172
3.729 g → 26 mm (PLATE XV)
Rev.:  same die as 172

184. 381.' *Obv.*:  same die as 172;
double struck
3.598 g ↘ 24 mm
Rev.:  same die as 172

185. 381. *Obv.*:  same die as 172
3.985 g ↙ 26 mm
Rev.:  same die as 172

186. (Kāzarūn) 381.
 Obv.:  same die as 172
5.270 g ↙ 25 mm
Rev.:  same die as 172 (?)


187. (Kāzarūn) 381.

Obv.: 

same die as 172


Rev.: 

same die as 172




3.849 g ↘ 25 mm

188. (Kāzarūn) 381.

Obv.: 

same die as 172


Rev.: 

same die as 172




5.595 g ↘ 24 mm

189. (Kāzarūn) 381.

Obv.: 

same die as 172



Rev.: 

same die as 172



4.488 g ↘ 26 mm

190. 381.

Obv.: same die as 172 (?);
double struck*Rev.:* 


as 172




margin: as 172

2.046 g ↗ 26 mm

191. 381.


Obv.: 

same die as 174

Rev.: same die as 190;
double struck

3.946 g ↗ 27 mm

198. 381.

Obv.: 

same die as 174


Rev.: 

same die as 190




3.410 g ↙ 26 mm

199. 381.


Obv.: same die as 174;
double struck*Rev.:* same die as 190;
double struck

6.296 g ↗ 25 mm

200. 381.

Obv.: 

same die as 174


Rev.: 

same die as 190




4.053 g ↗ 26 mm

201. 381.


Obv.: 

same die as 174


Rev.: same die as 190;
double struck

3.976 g ↗ 23 mm

202. (Kāzarūn) 381.

Obv.: 

same die as 174


Rev.: 

same die as 190 (?)



4.047 g ↗ 22 mm

203. (Kāzerūn) 381.

Obv.: 

as in 172

Rev.: لله

as in 172



margin: date


pointillate circle

? pairs of annulets

margin: as 172

4.012 g ↘ 23 mm

204. (Kāzarūn) 381.

Obv.: 

as 172;

double struck

Rev.: لله


as 172.

margin: ?

margin: as 172

4.083 g ↗ 23 mm

205. (Kāzarūn) 381.

Obv.: 

same die as 172


Rev.: لله

as 172

margin: as 172

5.476 g ↘ 28 mm

206. 38x.

Obv.: 

لا اله الا الله
 وحده لا شريك له
 القادر بالله
 فخر الدولة
 وفلك الامة

margin: mint and date
 solid line circle

3.617 g ↘ 25 mm

Rev.: لله

محمدرسول الله
 الملك
 صمصام الدولة
 وشمس الملة
 ابو كاليجار

margin: solid line circle
 Qur'an IX, 33

Kard Fanā Khusraw

207. 355.

Obv.: ن

لا اله الا الله
 وحده لا شريك له
 ركن الدولة
 ابو على

margin: mint and date
 pointillate circle
 4 pairs of pellets

3.609 g ← 24 mm

Rev.: 𐤎𐤌𐤃𐤓𐤕𐤌𐤃

محمد رسول الله
 المطيع لله
 الامير العدل
 عضد الدولة
 ابو شجاع

margin: pointillate
 circle
 Qur'an IX,
 33

208. 356.

Obv.: ا

as 207

بويه

margin: mint and date
 solid line circle

3.038 g ↘ 25 mm (PLATE XV)

Rev.: ف

as 207

margin: as 207

209. 356.

Obv.: ا
















as 207

بويه

margin: as 208

3.464 g ↗ 25 mm

Rev.: effaced

210. 35x. *Obv.*:  as 207;
double struck

margin: ?
2.695 g ↘ 24 mm
- Rev.*:  as 207;
double struck

margin: as 207
211. 361. *Obv.*:  as 207

margin: mint and date
pointillate circle
5 annulets
2.862 g ↗ 25 mm
- Rev.*:  as 207

margin: as 207
212. 362. *Obv.*:  as 207

margin: as 211
2.942 g ↗ 27 mm
- Rev.*:  as 207;
die break at
6:00
margin: as 207
213. 363. *Obv.*:  as 207;
double struck

margin: as 211
3.421 g ↘ 26 mm
- Rev.*:  as 207;
die break at
12:00

margin: as 207

214. 363.

Obv.: ۛ

as 207



margin: as 211

3.099 g ↘ 25 mm

Rev.: ف

as 207



margin: as 207

215. 363.

Obv.: ۛ

same die as 214



3.015 g ↘ 26 mm

Rev.:

same die as 214;

double struck



216. 380.

Obv.: ○

لا اله الا الله
 وحده لا شريك له
 الطائع لله
 فخر الدولة
 وفلك الامة

margin: mint and date
 pointillate circle
 5 pellets

4.429 g ↗ 24 mm

Rev.: لله

محمد رسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة
 ابو كاليجار

margin: as 207

217. 380.

Obv.: ○

same die as 216

4.359 g ↗ 25 mm

Rev.: لله

as 216

margin: as 207

218. 380. *Obv.*: ○
 same die as 216
 Rev.: 𐭪𐭥
 as 216
 margin: as 207
 4.391 g ↗ 25 mm
219. 380. *Obv.*: ○
 same die as 216
 Rev.: 𐭪𐭥
 same die as 217
 4.500 g ↗ 25 mm
220. 381. *Obv.*: as 216;
 double struck
 Rev.: 𐭪𐭥
 as 116;
 double struck
 margin: as 211
 4.827 g ↘ 24 mm (broken)
 margin: as 207
221. 381. *Obv.*: same die as 220
 Rev.: 𐭪𐭥
 as 216
 margin: as 207
 4.120 g ↘ 26 mm
222. 381. *Obv.*: same die as 220
 Rev.: 𐭪𐭥
 same die as 220
 4.856 g ↘ 24 mm
223. 381. *Obv.*: same die as 220
 Rev.: 𐭪𐭥
 as 216
 𐭪
 margin: as 207
 3.680 g ↘ 26 mm

224. 381. *Obv.*: same die as 220*Rev.*: لله

same die as 221

4.335 g ← 24 mm

225. 381. *Obv.*: same die as 220*Rev.*: لله


as 216

margin: as 207

4.462 g ↗ 25 mm

226. 382. *Obv.*: 

as 216

*Rev.*: 

محمدرسول الله

الملك


صمصام الدولة

وشمى الملة

ابو كالجار

margin: mint and date
pointillate circle
4 pairs of annuletsmargin: 2 solid line
circles
Qur'an IX,
33

3.512 g → 25 mm (PLATE XVI)



227. 382. *Obv.*: 
same die as 226*Rev.*: لله

as 216



margin: ?


3.385 g ↘ 25 mm

228. 382. *Obv.*: 
same die as 226*Rev.*: 

same die as 226

4.727 g ↗ 26 mm

229. 38x.


Obv.: 

as 216



margin: as 226

4.708 g ↗ 25 mm

Rev.: 

as 216;

double struck



margin: as 207

MINTS OUTSIDE OF FĀRS PROVINCE

Bardasīr

230. 362.

Obv.: 

لا اله الا الله
 وحده لا شريك له
 ركن الدولة
 ابو على
 ⊙

margin: mint and date
 pointillate circle
 5 annulets


3.409 g ↗ 17 mm (PLATE XVI)

Rev.: لله

محمد رسول الله
 المطيع لله
 الامير العدل
 عضد الدولة ابو شاع
 شيرريل بن عضد
 الدولة
 die break at 6:00

margin: pointillate
 circle
 Qur'an IX,
 33

231. 363.

Obv.: 

as 230



margin: as 230


3.581 g ↗ 28 mm

Rev.: لله

as 230

margin: as 230

232. 365.

Obv.: 

as 230



margin: as 230

2.786 g ↗ 27 mm

Rev.: لله

as 230, but

الملك العدل

الامير العدل

margin: as 230

Bamm

233. 362.

Obv.: 

لا اله الا الله
 وحده لا شريك له
 ركن الدولة
 ابو على



margin: mint and date
 pointillate circle
 5 annulets

3.891 g ↗ 27 mm

Rev.: لله

محمدرسول الله

المطيع لله

الامير العدل


عضد الدولة ابو شعجاع

شيرديل بن عضد

الدولة

margin: pointillate
 circle
 Qur'an IX,
 33

234. (Bamm) 362.

Obv.: 

as 233



margin: as 233


4.107 g ↗ 28 mm

Rev.: لله

as 233

margin: as 233


235. (Bamm) 362.

Obv.: 

same die as 233




4.630 g ↗ 28 mm

Rev.: 

same die as 233

236. 363.

Obv.: 

as 233



margin: as 233


5.033 g ↗ 27 mm

Rev.: لله

as 233

margin: as 233

237. 365.

Obv.: 

as 233



margin: as 233


3.543 g ↘ 26 mm

Rev.: لله

as 233 (?)

margin: as 233

238. 366.

Obv.: 

as 233



margin: as 233

3.472 g ↗ 25 mm

Rev.: لله

الطائع لله
 الملك العدل صند
 الدولة ابو شجاع
 شيرديل بن عضد
 الدولة

margin: as 233

239. 366 ?

Obv.: م

لا اله الا الله
 وحده لا شريك له
 الملك العدل صند
 الدولة و تاج الملة
 ابو شجاع



margin: as 233

5.901 g ↙ 25 mm (PLATE XVI)

Rev.: لله

محمدرسول الله
 صلى الله عليه وسلم
 الطائع لله
 شيردیل بن عضد
 الدولة

margin: as 233

240. 368.

Obv.: م

as 239



margin: mint and date
 solid line circle
 ?

4.337 g ↘ 26 mm

Rev.: لله

محمدرسول الله
 الطائع لله
 شيردیل بن عضد
 الدولة

margin: as 233

241. (Bamm) 368.

Obv.: م

as 239



margin: as 240


3.926 g ↗ 25 mm

Rev.: م

as 240

margin: as 233

242. (Bamm ?) 36x.

Obv.: 
as 233


margin: as 233

4.471 g √ 29 mm

Rev.: الله
as 233

margin: as 233

243. (Bamm ?) 36x (362?).

Obv.: 
as 233
⊙

margin: as 233



4.783 g √ 25 mm

Rev.: الله
as 233

margin: as 233


Jiruft

244. 365.

Obv.: 
لا اله الا الله
وحده لا شريك له
ركن الدولة
ابو على


margin: mint and date
pointillate circle
5 annulets

4.312 g ↗ 25 mm (PLATE XVI)

Rev.: 
الطائع لله
الملك العدل عمند
الدوله ابو شيا ع
شيرويل بن عمند
الدوله

margin: pointillate
circle —
Qur'an IX,
33

245. (Jiruft) (372?).

Obv.: لا اله الا الله
 وحده لا شريك له
 الملك العدل عضد
 الدولة و تاج الملة
 ابو شجاع

Rev.: لله
 محمدرسول الله
 الطائع لله
 شيردیل بن صند
 الدولة

double struck

margin: pointillate circle
 (mint and date)

margin: as 244

3.393 g ↗ 22 mm

246. (Jiruft) (372?).

Obv.: same die as 245

Rev.: as 245

margin: as 244

3.908 g ↘ 25 mm

247. 381.

Obv.: لا اله الا الله
 وحده لا شريك له
 الطائع لله
 فخر الدولة
 وفلك الامة
 ٧




Rev.: لله
 محمدرسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة
 ابو كاليجار
 ٨

double struck





margin: mint and date
 pointillate circle

margin: pointillate
 circle
 Qur'an IX, 33

3.503 g ↘ 24 mm

248. 381. *Obv.*:  same die as 247;
double struck

3.778 g ↘ 24 mm (PLATE XVI)
- Rev.*: لله
same die as 247;
double struck


Sīrjān

249. 361. *Obv.*:  لا اله الا الله
وحده لا شريك له
ركن الدولة
ابو على
- Rev.*: لله
محمد رسول الله
المطيع لله
الامير العدل
عضد الدولة ابو شجاع
شيرديل بن عضد
الدولة

- margin: mint and date
pointillate circle
5 annulets
- margin: pointillate
circle
Qur'an IX, 33
- 3.174 g ↗ 27 mm (PLATE XVI)
250. (Sīrjān?) 36x (367 or 369).
Obv.:  as 239

- Rev.*: لله
محمد رسول الله
الطائع لله
الملك العدل عضد
الدولة ابو شجاع
شيرديل بن عضد
الدولة
- margin: as 249?
- margin: as 249.
- 3.073 g ↗ 24 mm

‘*Umān*

251. 362.

Obv.: لا اله الا

الله وحده

لا شريك له

ركن الدولة

ابو على



margin: pointillate circle
solid line circle
mint and date
solid line circle
4 half-annulets
pointillate circle

3.032 g ↘ 26 mm (PLATE XVI)

Rev.: محمدرسول الله

المطيع لله

الامير العدل

صند الدولة

المرزبات ابن

عضد الدولة

margin: pointillate
circle
Qur'an IX,
33

252. 364.

Obv.: ٤

لا اله الا الله

وحده لا شريك له

ركن الدولة

ابو على



margin: mint and date
pointillate circle
5 annulets

3.272 g ↘ 24 mm

Rev.: لله

محمدرسول الله

المطيع لله

الامير العدل عضد

الدولة ابو شجاع

المرزبان بن عضد

الدولة

margin: as 251

253. 365. *Obv.*: ۛ
لا اله الا الله
وحده لا شريك له
الملك العدل عضد
الدولة و تاج الملة
ابو شجاع
●
margin: mint and date
solid line circle
2.370 g ↘ 25 mm
- Rev.*: لله
محمد رسول الله
الطائع لله
المرزبان بن عضد
الدولة
- margin: as 251
254. 365. *Obv.*: as 252
margin: as 252
4.496 g ↑ 26 mm (PLATE XVII)
- Rev.*: لله
as 252
margin: as 251
255. 366. *Obv.*: ۛ
as 252
margin: as 252
5.013 g ↓ 26 mm
- Rev.*: لله
as 252
margin: as 252
256. 381. *Obv.*: ۛ
لا اله الا الله
وحده لا شريك له
فخر الدولة
وفلك الامة
■
margin: mint and date
pointillate circle
? pellets
4.871 g ↗ 25 mm
- Rev.*: لله
محمد رسول الله
الملك
صمصام الدولة
وشم الملة
⊙ ■
margin: as 251

257. 381.

Obv.: ❦

as 256

Rev.: لله

محمد رسول الله

الطائع لله

الملك العدل

صمصام الدولة

وشمس الملة

margin: mint and date

pointillate circle

5 annulets with pellet

in center

margin: as 251

3.177 g ↘ 26 mm

258. 381.

Obv.: ⚭

as 256

☪ double struck

Rev.: لله

as 257

margin: pointillate circle

mint and date

solid line circle

? annulets?

pointillate circle

margin: as 251

4.206 g ↘ 25 mm (PLATE XVII)

259. 381.

Obv.: ⚭

same die as 258

☪

Rev.: لله

same die as 258;

die break at 12:00

4.899 g ↘ 25 mm

260. 38x.

Obv.:

لا اله الا الله
 وحده لا شريك له
 القادر بالله
 فخر الدولة وفلك
 الامة

margin: mint and date
 pointillate circle
 ?

4.272 g ↑ 22 mm

Rev.: لله

محمدرسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة
 ابو كاليجار



margin: as 251

261. 38x.

Obv.:

as 260

margin: mint and date
 pointillate circle
 4 sets of three pellets

4.111 g ↑ 23 mm (PLATE XVII)

Rev.: لله

as 260

margin: as 251

262. 3xx.

Obv.:

as 252



margin: pointillate circle
 mint and date and
 ضرب هذا لد ينار
 pointillate circle

5.195 g ↑ 27 mm (PLATE XVII)

Rev.: لله

as 252

margin: as 251

Madinat al-Salām

263. 352.

Obv.: ع ص

لا اله الا الله
 وحده لا شريك له
 معز الدولة
 ابو الحسين
 عز الدولة
 ابو منصور
 بويه

margin: mint and date
 Qur'an XXX, 3-4

Rev.: لله

محمد رسول الله
 صلى الله عليه وسلم
 المطيع لله
 ركن الدولة
 ابو على
 بويه

margin: solid line
 circle
 Qur'an IX,
 33
 solid line
 circle

3.025 g ↘ 26 mm (PLATE XVII)

264. 364.

Obv.: ان

لا اله الا الله
 وحده لا شريك له
 ركن الدولة
 ابو على
 بويه
 double struck

margin: as 263

2.977 g ↗ 25 mm (PLATE XVII)


Rev.: لله

محمد رسول الله
 الطائع لله
 الملك العدل
 عضد الدولة
 ابو شعجاع

margin: as 251

Nā'in

265. 348.

Obv.: 

لا اله الا الله
 وحده لا شريك له
 ركن الدولة ابو على

margin: mint and date
 2 pointillate circles
 5 pairs of pellets

Rev.: لله

محمدرسول الله
 المطيع لله
 الامير العدل عضد الدولة
 ابو شجاع

margin: 2 pointil-
 late circles
 Qur'an IX,
 33

3.045 g √ 26 mm (PLATE XVII)

No mint name

266. 381.


Obv.: 

لا اله الا الله
 وحده لا شريك له
 الطائع لله
 فخر الدولة
 وفلك الامة

margin: mint and date
 ?

5.605 g √ 24 mm

Rev.: لله

محمدرسول الله
 الملك العدل
 صمصام الدولة


double struck

margin: ?

267. 381.

Obv.: لا اله الا الله
 وحده لا شريك له
 الطائع لله
 فخر الدولة
 وفلك الامة

margin: mint and date
 pointillate circle
 5 pellets


3.153 g → 27 mm

Rev.: لله

محمدرسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة
 ابو كاليجار

margin: pointillate
 circle
 Qur'an IX,
 33

268. 381.

Obv.: 
 لا اله الا الله
 وحده لا شريك له
 الطائع لله
 فخر الدولة
 وفلك الامة
 ○

margin: mint and date
 pointillate circle

3.027 g ↙ 22 mm
 ?

Rev.: لله

محمدرسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة
 ابو كاليجار

double struck

margin: pointillate
 circle
 Qur'an IX,
 33

269. 381.

Obv.: لا اله الا الله
 وحده لا شريك له
 القادر بالله
 فخر الدولة
 وفلك الامة



margin: mint and date
 Qur'an XXX, 3-4

3.294 g ↙ 23 mm

Rev.: لله
 محمدرسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة
 ابو كاليجار



margin: ?

270. 381.

Obv.: لا اله الا الله
 وحده لا شريك له
 الطائع لله
 فخر الدولة
 وفلك الامة

margin: mint and date
 pointillate circle
 5 pellets

4.195 g ↗ 26 mm

Rev.: لله
 محمدرسول الله
 الملك العدل
 صمصام الدولة
 وشمس الملة

margin: pointillate
 circle
 Qur'an IX,
 33

Addendum

271. Fāsa. 381.

Obv.: لا اله الا الله
 وحده لا شريك له
 الطائع لله

Rev.: لله
 محمدرسول الله
 الملك العدل

فخر الدولة
وفلك الامة
س

margin: mint and date
pointillate circle
? annulets

2.762 g 24 mm

272. Fasā. 38?

Obv.: as 271

س

margin: mint and date
pointillate circle
4 annulets

3.638 g 24 mm

صمصام الدولة
وشمن الله
ابو كاليجار
ن

margin: pointillate
circle
Qur'an IX,
33

Rev.: as 271

ن

margin: as 271

NUMISMATIC ART IN AMERICA TO 1796

(PLATE XIII)

CORNELIUS C. VERMEULE

The most natural general statement to make is that the numismatic art of Colonial America hardly reached an elevated aesthetic level until completion of the first full set of federal designs. The eighteenth century saw the influence of direct importations of themes and designs from Europe, from Hispanic America, and to a minor extent from the British or Franco-British provinces in Canada. That the colonies often had the unused or unwanted copper coinages of England and Ireland dumped upon them is well known. Coins and tokens from the mother nations, whether brought casually or systematically, could not fail to influence domestic die designers. Since the silver coins of the Bourbon kings of Spain travelled freely through the colonies, Spanish concepts of design on those coins influenced what was created locally.

Above all, however, until Thomas Jefferson and Benjamin Franklin had their dialogues about eagles or turkeys as suitable reverse companions for mother Liberty, it was the unflattering but realistic picture of King George III which dominated the obverse and of Britannia which sat in visual splendor on the reverse. Liberty, or a general personification of a state, was easily fashioned out of the draped and/or cuirassed, wreathed busts of George and his clever but periodically irrational grandson (George III) under whom the colonies revolted. Britannia with her attributes of maritime power in war and peace was easily turned into a fuller image of Liberty, Justice, America (Columbia), or of an individual state. The attributes could be changed as readily as they were modified or substituted on the Roman imperial coinage of Hadrian, Antoninus Pius, or Gordian III.

That the coinages of the first states and the early (and later) federal coinages had a strongly Roman cast was a natural product of the proto-Neo-Classic revival which was to sweep both sides of the Atlantic from the American through the French Revolutions. The decades of America's progress from colonial status through revolution and inde-

pendence to working federalization were the years when art, literature, and politics were regulated by visions of Graeco-Roman utopia. The artifacts of the buried cities on the Bay of Naples, Pompeii and Herculaneum, made Roman designs, here Roman coinage, almost a part of everyday educated life. Edward Gibbon, his mind attuned to the music of Romano-Christian continuity, wrote his *Decline and Fall*, and the stricter, more sober architecture of the second Palladian revival gave the settings for a new *Romanitas* where before Baroque putti had flourished and Rococo satyrs had frolicked.

All this hardly reached Boston, New York, Philadelphia, or Charleston in the grandeur of the Louvre, Versailles, or Adelphi House. It came to the colonies in the form of well-thumbed texts of Livy or Vergil, and the coinages executed by local silversmiths, clockmakers, and musket manufacturers, who were equally capable of asking an apprentice to decline a Latin noun as to pull flans from the furnace. That the first coppers of the new states should look like Roman dupondii or aes was natural, not only because their British (and Irish) counterparts did so but because the high rate of rustic literacy was attuned to Roman images. The climate had long remained favorable, on all levels, for an art based on Roman concepts in personified form and the wreaths, eagles, and majestic lettering of a Ciceronian polity.

The fortunes of artistic immigration and regional needs in the New World meant that there were palpable gaps between the numismatic aspirations of newly autonomous governing bodies and what emerged as circulating coinage. The crisis of paper money in the aftermath of Revolution and the uncertainties of form, dimensions, and quantity in the federal coinage kept issues local and sporadic in artistic achievement as well as denominations or metals until 1793 and after. Some of the coinages of the years 1776 and subsequent were patterns, indicating the gap which existed between desire and reality. Chief in this class was probably the Continental Dollar, dated 1776, conceived in terms of designs as much or much more symbolic and literary than visually aesthetic. Indeed, the readiness with which the designs were used on contemporary paper currency shows that they were the creation of an engraver on a metal plate (apparently Elisha Gallaudet in Philadelphia) rather than a sculptor modelling in miniature or carving in intaglio.

The parallel to the linear artistry of the Continental Dollar in monumental American silver is provided in the Sons of Liberty Bowl fashioned in Boston after June 30, 1768 by the patriot Paul Revere (PLATE XIII).¹ Other symbols are evident, but they are arranged in the same circular fashion of a medallion or an engraved printed vignette. Wreaths, scrolls, flags, and liberty caps, not to mention the major inscriptions, all speak of an iconography and decorative patterns to be tried and refined as the American Colonies moved through those celebrated stages from unrest to federation. The Sons of Liberty Bowl was one of the few such major creations in precious metal not designed for liturgical or personal purposes but as a statement of political action. In this respect it was hardly different, in spirit as well as in art, from patterns for a coinage like the Continental Dollar.

In the overall format and specific details of the Nova Constellatio silver patterns of 1783 and the use of the design on coppers struck in large quantities at Birmingham, England in 1783 and 1785, can be seen the genesis of designs for federal coins from 1793 to the eve of the Civil War. Whether or not these should be classed as English imports from American ideas, their artistry was thoroughly in keeping with the aspirations of the new Confederation. The radiate eye of the first seal remains with us at the Bicentennial on the reverse of the paper dollar. Stars in a radial sun were to be exploited in the 1850s and 1860s in patterns and coins by James B. Longacre, and the inscription in and around a wreath, with date below, was to be the standard reverse of our half cents and cents through 1857. When these designs, obverse or reverse, were linked with compositions involving figures, the results were aesthetically disastrous. Seated Justice of the Immune Columbia series of 1785 is as barbaric as a backwoods Anatolian gravestone in the second century of the Christian era. The female symbolic of Inimica Tyrannis America(na) on the Confederatio coppers of the same year is truly gross, an early federal expression in artistic terms recalling the anticlassical awkwardness of mythological figures in Byzantine ivory carving of the Middle Ages.

¹ Sons of Liberty Bowl, 1768. H.: 5 1/2 in. Diam. (of lip): 11 in. Museum of Fine Arts, Boston, 49.45. Gift by Subscription and Francis Bartlett Fund.

Crude as they generally were, the coinages of the states in the 1785–88 period contributed to the circulation of designs later incorporated into the artistic repertory of the United States coinage. In 1785 Vermont supplied an accomplished symbolic landscape (the “Green Mountain”) matched with the radiate star-studded eye of early republicanism, the dies the work of a respected goldsmith. New York coppers featured the eagle on globe, to turn up again on the pattern quarter dollar of 1792, and the heraldic eagle of Dupré’s Diplomatic Medal. Connecticut offered little except quaint imitations of the British coinage, but Massachusetts could match her local Indian chief of her State emblem with another version of the heraldic eagle. Finally, New Jersey’s handsome series promoted the English-developed shield design which became so prominent a feature, in more elaborate form, on Longacre’s two-cent and nickel five-cent pieces at the end of the Civil War.

One would like to be able to speak of a rising tide of national artistry spilling over into the Fugio (or “Franklin”) cents of 1787, but these coins, the first issued by authority of the United States, were merely popular applications of the Continental Dollar. Nowhere is it better demonstrated that the best in native American numismatic “art” before the establishment of the mint at Philadelphia, was the work of goldsmiths, jewelers, or engravers for printing than in Ephraim Brasher’s doubloons also dated 1787. The radiate pyramidal mountain surrounded by legends for New York and the nation on the obverse is as effective a design as could be produced in the states before the Liberty heads in 1793 and 1794. The heraldic eagle of the reverse reflected, in almost rustic terms, Dupré’s reverse for the medal commemorating the Declaration of American Independence, which was designed and struck in Paris shortly after the Revolution. Brasher’s doubloons sum up, albeit in the most precious of metals, the characteristics of unsettled imagery and imported iconography inherent in all these local, sporadic attempts at coinage between 1776 and 1793.

The United States mint issues of 1792 were mannered, just-more-than-crude stepping stones to the more confident coins of 1793 and the accomplished dies of 1794 and later. The disme and half disme reverses of Robert Birch showed that, unless the eagle was heraldic from the beginning, the bird could hardly deserve notice until the great flying eagles of Christian Gobrecht and Titian Peale in 1836. The most durable

designs to arise in the trials of 1792 were the reverses of the cents, combinations of inscriptions and wreaths which continued on this coin in one form or another through 1958. The Birch dies demonstrate the artistic truism of the early federal coinages, whether semi-official efforts or the first national mint products, that local engravers could handle lettering, simple symbols, and even limited landscapes well, but that a new generation of designers would be needed to lift the coinage to the level of its European counterparts.

With the advent of the die designers working under the artistic influence of Charles Wilson Peale, notably Adam Eckfeldt, Joseph Wright, and, above all, Robert Scot, the United States coinage was propelled to a visual level equalling the portraiture of Gilbert Stuart or the historical epics of John Trumbull. At that stage the numismatic art of the developing republic could command respect far beyond the gushings of patriotism or mere antiquarian curiosity.

THE FIRST INDIAN PEACE MEDAL OF THE UNITED STATES

(PLATE XVIII)

R. W. JULIAN

In 1945 Damon G. Douglas published an article¹ on the first Indian Peace medals issued by the United States. He brought together a number of diverse sources to show that the dies had actually been cut and medals distributed to certain Indians. Some additional information can now be provided.

The reason for the preparation of these first medals was the mission of Colonel Joseph Martin, in the latter part of 1785, to the Cherokee nation. The result of this journey was the Treaty of Hopewell, November 28, 1785. The known records are silent as to whether or not Martin passed out medals at the signing of the treaty.

A few years later, on January 5, 1792, Secretary of War Knox reported² that Bloody Fellow had presented him with silver peace medals to be exchanged for others of the United States; this Indian was one of several Cherokees visiting Philadelphia, then the seat of government. Knox went on to say that "these medals were presented by Colonel Martin, about four or five years ago, but as some disturbances have since happened, they are now returned, to obtain others from the United States."

Douglas also found and printed, from the unpublished papers of the Confederation government, a petition from Thomas Goadsby³ to Congress in early 1788 asking that he be paid "for the furnishing of two Dye's (at a stipulated price) for the purpose of striking medals for

¹ Damon G. Douglas, "The First United States Indian Chief Peace Medal," *Num.* 1945, pp. 689-93.

² Francis Paul Prucha, *Indian Peace Medals in American History* (Madison, Wis., 1951), p. 6.

³ Goadsby was one of the contractors for the New Jersey coinage of 1786-88.

the Savages.”⁴ In June 1788, however, this petition was refused on the grounds that the original contract had been made with Albion Cox⁵ and not with the petitioner. The former at this time was in England, having fled there to avoid imprisonment for debt.⁶

The present writer recently came across documentary evidence that gives us the outcome of the dispute over payment for the dies. In the *Hamilton papers*⁷ there is a reference to a statement sent to Congress on August 5, 1790, which was to “Make Good Some Deficiencies in the Former Estimates on Which Appropriations Were Made by Congress,” presumably meaning that Congress had failed to appropriate enough funds to cover certain types of accounts that had been presented for payment. These particular items cover claims dating both before and after 1789 and one is of special numismatic significance:

To Matthias Ogden Assignee of Albion Cox for the amount of an Account settled at the Treasury the 4th. August 1790 being for a pair of dies made for the purpose of striking Indian Medals; by direction of the late Board of Treasury[\$]140 -

Douglas illustrated a copper piece which he believed to be a striking from the dies in question. The present writer does not dispute this attribution, although definitive evidence is lacking. The piece is now in the collection of the American Numismatic Society. (PLATE XVIII)

Although the Hamilton reference establishes the payment for the dies, some unanswered questions remain with respect to the whole issuance of these first post-1776 Indian Peace medals.

The large size of the medals (74 mm), assuming the Douglas attribution to be correct, is puzzling and certainly an oddity. There is serious doubt that a coinage press existed in this country which was heavy enough for striking a medal of this size without flaws in the finished piece. Such medals could perhaps have been struck in a crude drop press such as those which produced the earlier state and private Indian Peace

⁴ Douglas, “Peace Medal,” *Num.* 1945, p. 690.

⁵ Cox, like Goadsby, had been connected with the New Jersey coinage.

⁶ Don Taxay, *The U. S. Mint and Coinage* (New York, 1966), p. 103.

⁷ *The Papers of Alexander Hamilton*, ed. Harold Syrett, vol. 6 (New York, 1962), p. 536.

medals of the 1750s and 1760s. The poorly-struck appearance of the die proof illustrated would seem to lend credence to this theory.

If Cox was responsible for the dies, then it is logical to assume that he also contracted for the striking of the medals. Yet there is no payment for silver used in the medals. As a final point, it is interesting to note that these medals were very probably the first to be struck in this country under an official government order. The first mint-struck medals were not produced until the summer of 1795 or later.

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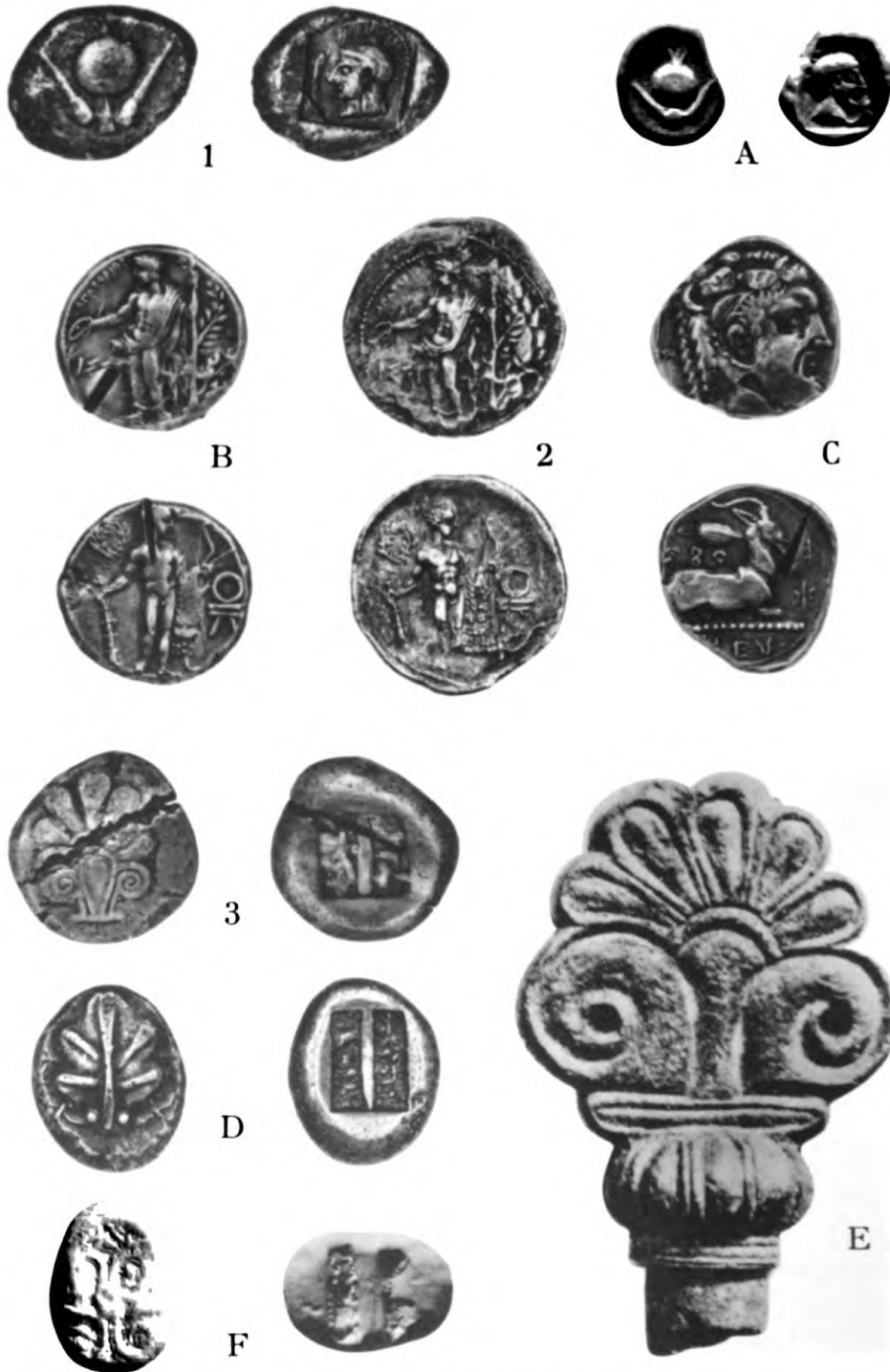
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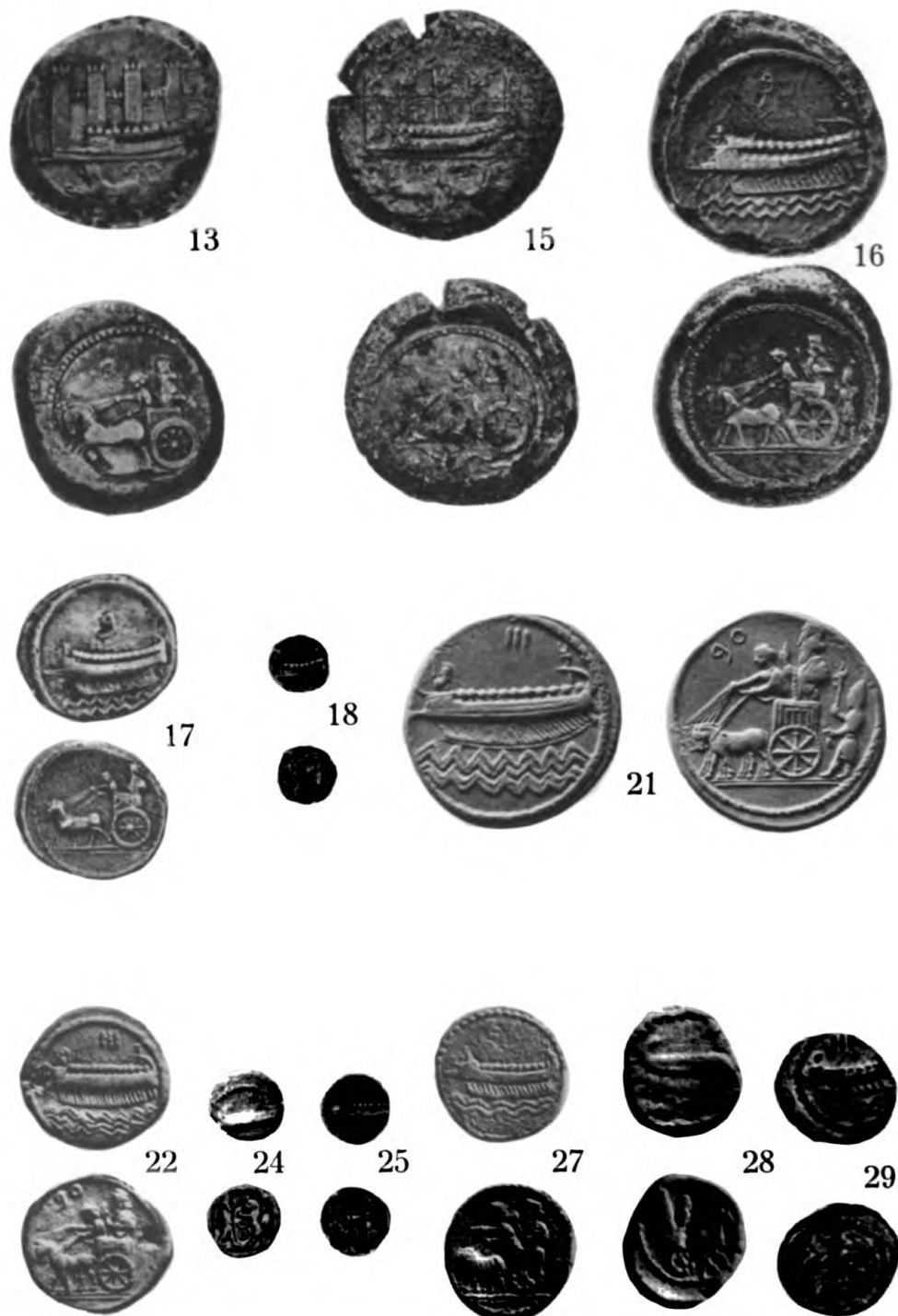


THREE RECENT GREEK ACCESSIONS



COINAGE OF SIDON

III



COINAGE OF SIDON

IV



COINAGE OF SIDON

V



1 (A1)



2 (A1)



3 (A2)



4 (A3b)



5 (A2)



6 (A2)



7 (A2)



DELTA HOARD OF EGYPTIAN "ALEXANDERS"

VI



1 (A2)



2 (A2)



3 (A3a)



4 (A3a)



5 (A3a)



6 (A3b)



DELTA HOARD OF EGYPTIAN "ALEXANDERS"

VII



1 (A2/B)



2 (B2)



3 (B2/A)



4 (B2)



5 (B3)



6 (B3)



DELTA HOARD OF EGYPTIAN "ALEXANDERS"

VIII



1 (C1)



2 (C1)



3 (C1)



4 (C1)



5 (C2)



6 (C2)



DELTA HOARD OF EGYPTIAN "ALEXANDERS"

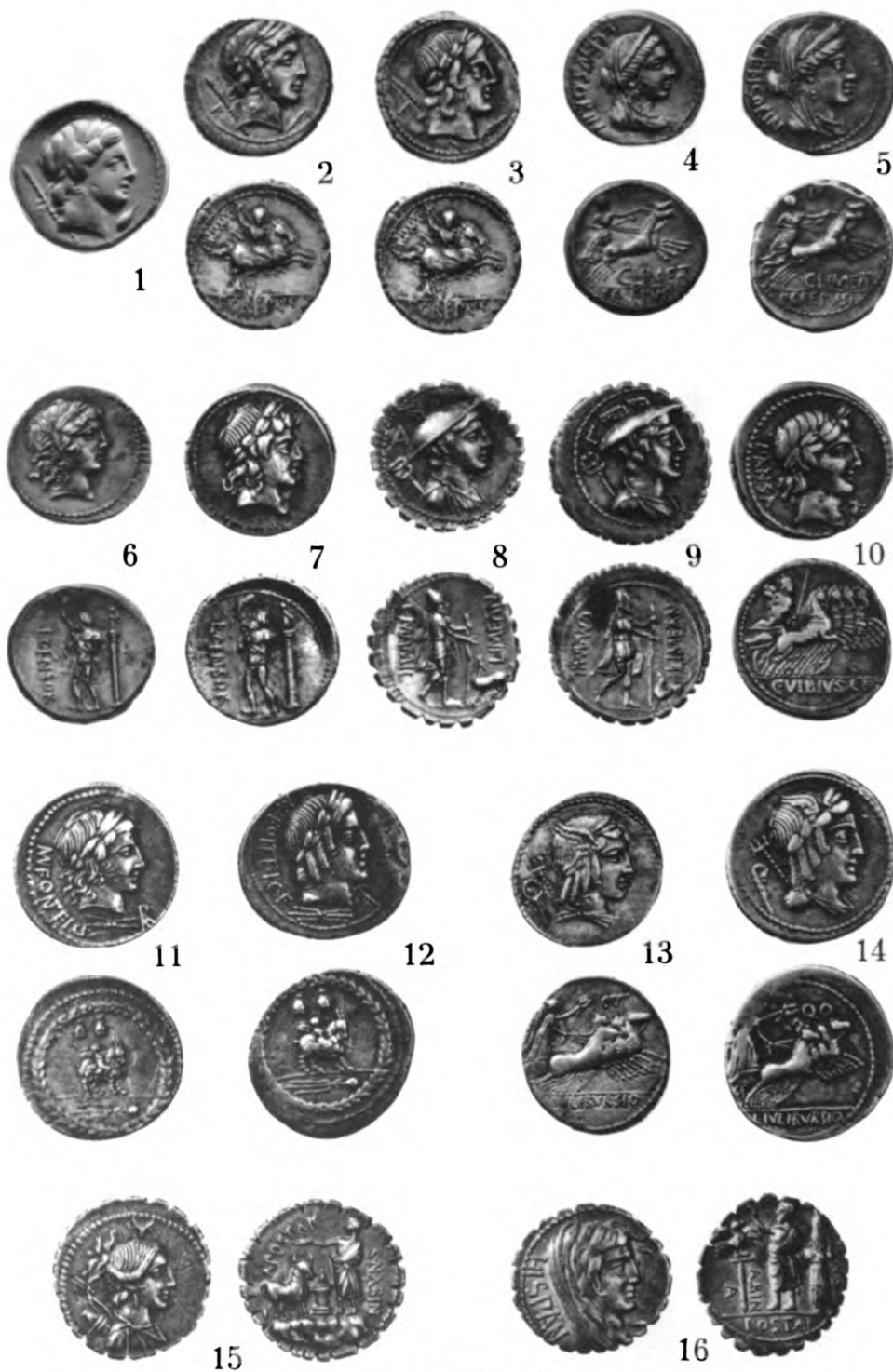
IX



ROMAN COIN HOARD FROM SICILY



XI



DENARII OF CREPUSIUS



EARLY ANONYMOUS FOLLES FROM ANTIOCH

The image displays three pairs of ancient coins, labeled 1, 2, and 3. Each pair consists of an obverse (left) and a reverse (right) side. Pair 1 shows a coin with a profile head on the obverse and a laurel wreath on the reverse. Pair 2 shows a coin with a profile head on the obverse and a laurel wreath on the reverse. Pair 3 shows a coin with a profile head on the obverse and a laurel wreath on the reverse.

4
(enlarged 2x)

The image displays two views of a large, ornate silver cup or bowl, likely a commemorative piece. The top view shows the exterior of the cup, which features an inscription at the top and a central medallion. The bottom view shows the interior of the cup, which contains a longer inscription and a small crest.

Exterior View (Top):

Inscribed around the rim: *Samuel Hopkins Nathl. Barker John White*

Central medallion: **Nº 45**
Wilkes & Liberty

Interior View (Bottom):

Inscribed around the rim: *Sam. Vernon, Danl. Barker, John Morgan, Nathl. Jones, John*

Main inscription: *To the Memory of the glorious NINETY-TWO Members of the Mass. Cong. who sacrificed their lives for the Liberty of their Countrymen on the 5th of Jan. 1790*

Small crest: *NOT TO BE SOLD*

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Original from
UNIVERSITY OF MICHIGAN



THE FĀRS HOARD

XV



THE FĀRS HOARD



226



230



239



244



248



249



251



THE FĀRS HOARD

XVII



254



258



261



262



263



264



265



THE FĀRS HOARD



FIRST U.S. INDIAN PEACE MEDAL

